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UTAH'S

AEROSPACE INDUSTRY

James A. Wood and John Brereton[1]

State economic development leaders have chosen to concentrate economic development efforts and resources on those industries for which Utah has a competitive advantage. The aerospace industry has been identified and targeted as one such industry. In September 1988 Governor Bangerter formed the Aerospace Task Force to develop an "action plan to strengthen and expand the aerospace industry in Utah."[2]

An understanding of the structure and long-term performance of Utah's aerospace industry was the first step in developing an action plan for increasing the state's aerospace employment. Therefore, the Department of Community and Economic Development requested the Bureau of Economic and Business Research to provide the state with research and current data on the locational advantages of Utah for the aerospace industry and its suppliers. The study includes a discussion of the structure of the industry in the state, the major firms, and their employment characteristics. Such information provides a useful frame-of-reference to evaluate Utah's potential for attracting new aerospace industry and increasing aerospace-related employment. This article presents a summary of that study.

Structure and Historical Development

Utah's aerospace industry is organized into four primary sectors: (1) Missile and Space Programs; (2) Military Aircraft; (3) Commercial Aircraft; and (4) Related Products and Services. These four sectors are reviewed as to their activity, employment, production and future commitments.

Missile and Space Programs

The structure of Utah's aerospace industry is characterized by its employment concentration in Missile and Space Programs. Employment in this sector totals 14,010 aerospace workers or 70.2 percent of the aerospace employment in the state. During the 1980s employment at Thiokol and Hercules increased substantially. The combined employment for these two major Utah aerospace companies in 1980 was 7,100; Thiokol with 4,500 employees and Hercules with 2,600. The combined employment increased to 12,650 by 1989; Thiokol with 8,150 employees and Hercules with 4,500. The increase of 5,550 employees reflects the role these two companies have played in the recent development and production of propulsion systems and filament winding for the Peacekeeper (MX), Midgetman and Trident missiles, the Space Shuttle program and U.S. Air Force launch vehicles systems.

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[1] James Wood is a research analyst at the Bureau of Economic and Business Research; John Brereton is president of The Brereton Group and collaborated on this project in a consulting capacity.

[2] Aerospace Development Action Plan, Department of Community and Economic Development, State of Utah, September 1989.

Although the 1980s have been a decade of rapid employment growth for the missile and space sector in Utah, the sector's beginning goes back to the late 1950s when Hercules Bacchus Works and Thiokol first began developing propulsion systems. The chronological development of Utah's aerospace industry is illustrated in Chart 1. The chart displays the gradual 30-year development of the state's aerospace industry and illustrates the early start of the missile and space sector in Utah.

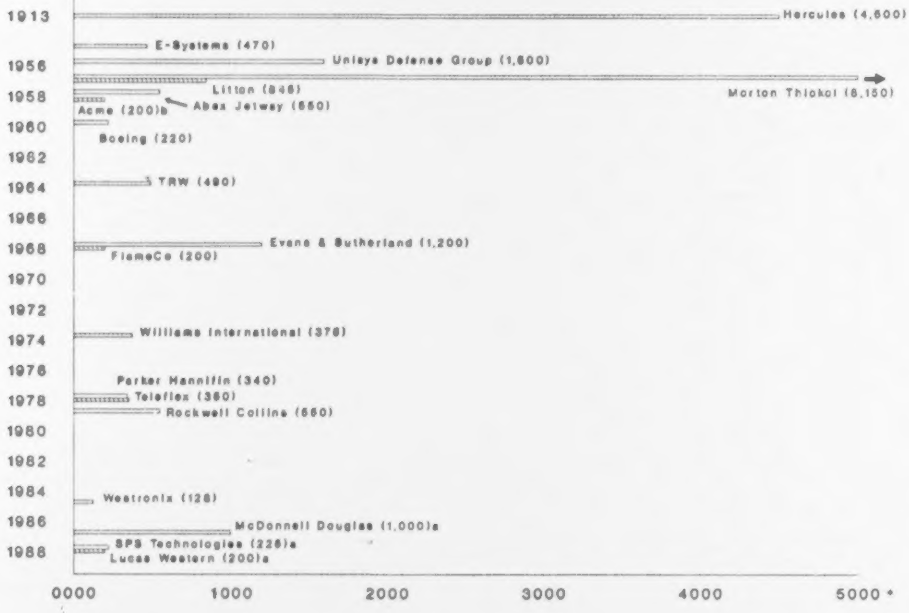
The Missile Programs

During the 1980s Utah benefitted from increased military demand for missiles which pushed the annual procurement for engines and propulsion units by the Department of Defense (DOD) from $661 million in 1980 to $1.6 billion by 1987. In constant 1982 dollars the compound annual growth rate for engines and propulsion units was an impressive 7.6 percent. The major firms comprising this sector are Thiokol, Hercules, Williams International, TRW, Teleflex, Boeing, Rockwell Collins, Lockheed, Globesat and Intraspace. The two largest of these companies, Thiokol and Hercules, account for over 63 percent of the total aerospace employment in Utah.

Minuteman and Peacekeeper (MX) -- These two missile programs of the U.S. Air Force have played an important role in Utah's aerospace industry. The beginning of aerospace employment in Utah can be traced to the selection in the late 1950s of Hill Air Force Base as the system's manager for the Minuteman Missile, a surface-to-surface missile (ICBM), with a range of over 7,000 miles. Shortly thereafter, the U.S. Air Force selected Thiokol as the manufacturer of the propulsion system for the Minuteman. At that time, Thiokol had a small Utah operation which was expanded rapidly to meet production schedules. Hercules also participated in the production of the propulsion system; and by the early 1960s Boeing and TRW were awarded subcontracts with the Air Force for Minuteman Missile maintenance. Minuteman Missiles are no longer in production.

Thiokol, Hercules, Boeing and TRW are all now participating in the production and operation of the

Chart 1
Year of Location of Aerospace Firms
in Utah and 1988 Employment



Source: Bureau of Economic and Business Research and interviews with firms 1988-89. Firms with 100 or more employees.

a Projected Total.

b Purchased from Utah Research and Development by Acme in 1987.

USAF Peacekeeper Missile (MX), an advanced system replacing the Minuteman. Hercules is producing the third-stage motor; Thiokol is producing the first-stage motor. Like the Minuteman, the Peacekeeper is a surface-to-surface missile with a range of over 7,000 miles.

Missile Program's Future -- The future of the MX Missile program is currently being debated. The Reagan Administration and the Air Force endorsed the placing of MX missiles on railroad cars--the rail-garrison basing mode. This system is opposed by some members of the Bush Administration in favor of placing small ICBMs (Midgetman Missile) in the southwestern United States. Probably the best case for Utah's aerospace industry would be some mix of both Peacekeeper and Midgetman since both Hercules and Thiokol are also involved in development of the Midgetman Missile. Hercules is developing the third-stage motor, laser ordinance system, stage separator and ignition system. Thiokol is developing the first-stage motor.

The Air Force had planned to procure 12 MX Missiles in fiscal year 1990 and 12 more in 1991. The cost of this procurement would be approximately $800 million each year. However, congressional support for the Midgetman and the Peacekeeper missile programs has eroded with the easing of east-west military tensions and mounting concern over the federal deficit. Both missile programs are presently vulnerable to substantial funding cuts.

Trident II -- Another strategic missile important to Utah's aerospace industry is the Trident II. Both Hercules and Thiokol are participating in the manufacture of the propulsion systems for the Trident II, which has widespread funding support and seems assured of its portion of the modernization program underway for the strategic triad (air, land and sea). Thiokol is producing second-stage Trident II motors and with Hercules is also producing first-stage motors. The Navy plans to acquire 63 Trident II Missiles in fiscal 1990 and 52 the following year. The procurement plan for the Trident II would be approximately $2 billion each year, making the Trident II by far the largest Department of Defense missile program. The Trident II has a range of over 4,000 miles.

Beyond the strategic missile programs for the Air Force and Navy, Utah's Thiokol, Hercules and Williams International are also propulsion manufacturers for a number of other DOD missile programs. Teleflex also produces missile launch systems for two DOD missile systems. These systems are outlined below:

	Agency	Phase	Company
Air-to-Air			
AMRAAM	Air Force/Navy	Develoment	Teleflex
Air-to-Surface			
HARM	Navy/Air Force	Production	Thiokol
ALCM	Air Force	Production	Williams
Surface-to-Air			
STANDARD	Navy	Production	Thiokol
Battlefield Support and Antiarmor			
Tow 1, 2, 2A	Army	Production	Teleflex

Besides these missile programs the Navy's Poseidon Missile was an important program for Thiokol for several years. The Poseidon is no longer in production. It should be noted that both Thiokol and Hercules have also been the leaders in winding filament technology for missile launch canisters of strategic missile systems.

The Space Programs

Both Thiokol and Hercules have been leading suppliers of solid rocket propulsion systems for space applications since the late 1950s. Consequently, aerospace employment in Utah has been closely linked with NASA and USAF space programs. The centerpiece has been the NASA Space Shuttle program for which Thiokol has produced the recoverable and reusable solid booster motors.

The Space Shuttle has been the largest single NASA program in the 1980s. Since 1984 the outlays by NASA for Space Shuttle Flight Control and Data Communications has increased from $2.9 billion to $5.1 billion in 1989. In constant 1982 dollars the outlays have increased at a high compound rate of 8.2 percent.

The propulsion systems are an important element of the Space Flight Control outlays; however, the expenditures on propulsion systems have been relatively erratic in the past few years due to the Challenger accident. The last four years of expenditures for propulsion systems for the Space Shuttle are: 1986, $789 million; 1987, $464 million; 1988, $595 million; and 1989, $712 million. Although the level of expenditures has been somewhat volatile, the propulsion system outlays, nevertheless, represent a relatively large program that has led to increased employment in the 1980s for Thiokol and Utah's aerospace industry.

Hercules has participated in the Space Shuttle program with the design and production of a carbon composite rocket motor booster case. The booster case, made of the exceptionally strong and lightweight carbon fibers produced by Hercules, has a significant weight and strength advantage over metal counterparts. Hercules carbon composites are 40 percent lighter than aluminum and stronger than high-strength steels.

In addition to the Space Shuttle program, Utah's aerospace industry plays an important role in the production of propulsion systems for Air Force launch vehicles. Hercules will be producing the propulsion systems for the Delta II medium launch vehicle as well as for the large Titan IV, an expendable-launch vehicle. Hercules has also undertaken a private satellite launch venture in their Pegasus program. This program has significant potential for small payload commercial satellites because of the low cost for an airborne launch. The satellite launch actually takes place from a mother aircraft (B-52).

The Utah aerospace companies identified by their products and services for the missile and space sector are given below:

Missile and Space Programs

Trident II, Peacekeeper (MX), Midgetman
Missile propulsion units
    Thiokol and Hercules

Minuteman and Peacekeeper Missile
maintenance
    TRW, Boeing, Rockwell and Lockheed

Propulsion units for tactical missiles
    Thiokol and Hercules

Missile launch systems for tactical missiles
    Teleflex

Filament winding and composite structures
for missiles and space vehicles
    Thiokol and Hercules

Jet engines for Cruise Missile
    Williams International

Space Shuttle solid booster rocket motor
    Thiokol

Delta II medium launch vehicle propulsion
unit
    Hercules

Titan IV expendable-launch vehicle solid
propulsion unit
    Hercules

Total Employment: 14,010
70.2 percent of Utah's total aerospace
    employment

Military Aircraft

In contrast to the national aerospace industry, the military aircraft sector in Utah is relatively small. Military aircraft is the largest sector in the national aerospace industry. In 1987 military aircraft accounted for $44.8 billion in sales or 40 percent of all sales in the aerospace industry, The sheer size of this sector is illustrated by a comparison to the Utah economy. In 1987 the Gross State Product of Utah was approximately $26 billion, equal to about 60 percent of the military aircraft sector nationally.

Unisys, Litton and E-Systems, three of the largest companies in Utah's military aircraft sector, located in Utah in the late 1950s. Since then the internal growth and location of new firms has been relatively slow. The pattern of growth shows that about every ten years there is another burst of activity in Utah's military aircraft sector. Ten years after Unisys, Litton and E-Systems located in Utah, Williams International and Flameco were started. Another ten years passed before Parker Hannifin, Teleflex and Rockwell Collins came to the state. And now ten years later SPS Technologies and Lucas Western have located in Utah (Chart 1).

Utah's aerospace sector has no military aircraft manufacturing activity. This sector is comprised entirely of subcontracting companies. The largest operation, with nearly 50 percent of the employment in this sector, is the Unisys Defense Systems Division. Unisys is engaged in classified production of communication systems for the military which includes surface-to-air, surface-to-surface and microwave communications.

Communications and navigation systems comprise the majority of the manufacturing activity of the military aircraft sector, although there are a number of companies producing a fairly wide variety of products. Utah's aerospace industry does not benefit from any single military aircraft program. It should be acknowledged at this point that the major role of Hill Air Force Base and the F-16 aircraft have not been overlooked, but these activities fall outside the scope of this study.

The Utah aerospace companies identified by their products or services for the military aircraft sector are given below:

Military Aircraft

Communication systems
    Unisys Defense Systems Division

Hydraulic flight equipment
    E-Systems, Parker Hannifin, and
    Lucas Western

Titanium, carbide screws
    SPS Technologies

Inertial navigation systems and navigation
aids
    Litton and E-Systems

Ground-based navigation systems
    E-Systems

Power conversion systems
Acme Utah Research and Development

Inventory function and jet aircraft radio assembly
Rockwell-Collins

Small gas turbine engines for target drone
Williams International

Printed circuit boards
Westronix

Fabrication of titanium parts for aircraft
Flameco

Total Employment: 3,596
17.7 percent of Utah's total aerospace employment

Commercial Aircraft

This sector has recently experienced a surge of activity with the Utah locations of McDonnell Douglas, SPS Technologies, Westronix and Lucas Western. The projected Utah employment for McDonnell Douglas — 1,000 to 1,500 employees—will add significantly to this sector. Presently, commercial aircraft activity accounts for fewer than 1,000 aerospace employees or only 5.6 percent of total aerospace employment in the state. Many of the companies in this sector manufacture for both military and commercial aircraft. Nationally, the commercial aircraft sector is growing rapidly with over $15.5 billion in sales accounting for 14 percent of total sales activity of the aerospace industry.

Utah's aerospace companies in the commercial aircraft sector are identified by product in the list below:

Commercial Aircraft Production

Subassembly for floor and sill frame for MD-80 and MD-11
McDonnell Douglas

Geared products and hydraulics
Lucas Western, Parker Hannifin

Titanium, carbide screws
SPS Technologies

Titanium fabrication
Flameco

Ground-based navigation aids and power systems
E-Systems, Acme Utah Research and Development

Inventory function and assembly of jet aircraft radio
Rockwell Collins

Printed circuit boards
Westronix

Total Employment: 1,162
5.6 percent of Utah's total aerospace employment

Related Products and Services

There are only two firms in this sector, Evans & Sutherland and Abex Jetway. Both firms are "home-grown" companies, although Jetway is now a subsidiary of PA Holdings Corporation. Jetway is a leading producer of boarding bridges for commercial airlines and was begun in 1958. Evans & Sutherland is a pioneer in flight training simulation systems for commercial and military use. The employment figures used for Evans & Sutherland exclude employment in the company's computer division.

Related Products and Services

Boarding bridges
Abex Jetway

Flight simulation systems
Evans & Sutherland

Total Employment: 1,300
6.5 percent of total aerospace employment in Utah

Employment Characteristics and Future Growth of Utah Aerospace Companies

Utah's aerospace industry employs 21,362 workers in 55 companies. Nineteen of these companies employ (or will employ in 1989), more than 100 workers. A ranking of these 19 companies by employment and the increase in employment by company between 1986 and 1989 are shown in Table 1. The aerospace companies with fewer than 100 employees and the principal products of each are shown in Table 2.

The increase in Utah's aerospace employment from 1986 to 1989 has been over 1,900 jobs. This increase reflects both internal growth from existing firms as well as new jobs created by the location of such firms as McDonnell Douglas, SPS Technologies and Lucas Western. Employment projections for each of the major aerospace companies appear in Table 3.

Table 1
Estimated Employment of Utah's Major Aerospace Companies

Company	1986	1989
Thiokol	6,500	8,150
Hercules	5,000	4,500
Unisys Defense Group	1,800	1,600*
Litton	900	845
Rockwell Collins	675	580
Evans & Sutherland	525*	750*
E-Systems	500	470
Abex	400	550
Williams International	400	375
TRW	325	490
Teleflex	300	350
Parker Hannifin	285	340
Boeing	220	220
Flameco	170	200
Westronix	80	128
Acme Utah Res. and Dev.	80	120
McDonnell Douglas.	--	230
SPS Technologies	--	140
Lucas Western	--	30
Total	18,160	20,068

*Employment estimate includes only employment in production of aerospace products.

Source: Bureau of Economic and Business Research, Graduate School of Business, University of Utah.

Table 2
Aerospace Companies in Utah
(aerospace employment less than 100)
1989

Company	Employment
Aerocor Corp. (aircraft equipment)	12
Alpine Ind. (aircraft equipment)	25
AV-MAT (commercial spare parts)	25
Bemsco (machine shop and parts)	50
Contour Composites (composite structures)	20
EDO Western (composite structures)	60
Elgie Corporation (frame and parts fab.)	15
Excell Industries (equipment)	10
Eyring Research (sfotware)	120*
Fiber Technology (composite structures)	100
Gentry Aerospace (chemical milling)	10
Globesat (satellite design, test and manuf.)	16
Grumman (database management)	4
Intraspace (satellite design, test and manuf.)	15
JTP Radiation, Inc. (antennas for radar)	21
Kitco (pneumatic repair kits)	65
Larson Davis (sound level meters)	35
Lockheed (missile maintenance)	36
Matco Manufacturing (brakes)	6
Northrup (missile maintenance)	9
Omnidata (portable data recorders)	50
Precision Propellors, Inc. (propellors)	2
R Cubed Composites (comp. structures)	10
Ream Tooling (machine work)	25
Satellite Tech. and Res. (sat. receivers)	50
Space Systems Engineering (R&D lab)	50
Tawsco (spare parts)	20
United Internat'l Group, Inc. (consultants)	6
United Precision (parts, engines)	40
Ute Manufacturing (metal fab.)	70
Val's Machine Shop (machine work)	65
Valley Enterprises (aircraft test equip.)	17
Wecco (oxidizing agent for rocket fuel)	70
Wencor West, Inc. (seals, pins, bearings)	80
Westscot Corp. (parts)	10
Winding Technologies (composite structures)	75
Total	1,294

*Fewer than 120 employees engaged in aerospace work.

Source: Bureau of Economic and Business Research, Graduate School of Business, University of Utah.

Table 3
Projected Employment of Utah's Major Aerospace Companies[a]

Company	1989	1994
Thiokol	8,150	8,150
Hercules	4,500	5,250
Unisys Defense Group	1,600[b]	1,600[b]
Litton	845	1,000
Evans & Sutherland	750[b]	1,250[b]
Rockwell Collins	580	580
Abex	550	550
TRW	490	490
E-Systems	470	750
Williams International	375	750
Teleflex	350	350
Parker Hannifin	340	520
McDonnell Douglas	230	1,500[c]
Boeing	220	220
Flameco	200	200
SPS Technologies	140	225
Westronix	128	250
Acme Utah Res. and Dev.	120	350
Lucas Western	30	200
Total	20,068	24,185

[a] Projections represent the "best-case scenario" for each company.

[b] Employment includes only employment in aerospace products.

[c] Includes plastic operations.

Source: Bureau of Economic and Business Research, Graduate School of Business, University of Utah.

The combined five-year employment projection shows a total employment in 1994 of 24,185, an increase of over 4,100 jobs.

Although precise historical employment data for Utah's aerospace industry are not available, an approximation of the employment history for the major companies in the industry is given below:

Employment Estimates and Projection for Major Aerospace Companies

1957	Beginning of Utah's aerospace industry
1970	6,500 employees
1980	12,000 employees
1989	20,068 employees
1994	24,185 employees

These figures show nearly a doubling of the aerospace jobs in Utah during the 1970s but it appears it will take almost 15 years for employment at the *major* aerospace companies to double again; 12,000 in 1980 to 24,185 by 1994. The projection may be low if both the Peacekeeper and the Midgetman Missile programs are funded--and at high levels--not likely in this period of large budget deficits and growing pressure on the DOD budget. Employment growth could also exceed projected levels if commercial airline companies shift to Hercules' composite structures and filament winding for the fuselage systems of the new generation of commercial aircraft.

Job Survey

An occupational survey of Utah's aerospace companies indicates that machinists and machine operators comprise only about 4 percent of the total labor force, fewer than 700 employees. The average wage range for a journeyman machinist is $12.50 to $13.50 per hour, and for a machine operator $8.00 to $9.00 per hour. Although machinists and machine operators represent a very small percentage of the total aerospace labor force, the shortage of workers in these occupations will probably make it more difficult for Utah to attract skilled manufacturing operations. At this time the state is better suited for semi-skilled operations such as McDonnell Douglas.

The largest production level occupation for the industry in Utah is engineers, with 4,100 employees or 20 percent of the labor force. The starting salary level in Utah for engineers is $28,000 to $30,000, consistent with the national market. The average engineer's salary is between $38,000 and $40,000. None of the firms interviewed complained of serious recruiting problems for engineers. They all view engineers as part of a national market rather than the local labor market.

Future Employment

During the 1980s, employment growth in Utah's aerospace industry increased by about 1,000 jobs a year. The driving force behind this employment growth was the build-up in strategic missile programs and the development of the Space Shuttle. For the state to achieve annual average employment increases above 1,000 employees, NASA and DOD missile and space programs would have to be expanded considerably or Utah must gain major entry into the commercial or military aircraft markets. This would require continued expansion of McDonnell Douglas or the location of a large commercial aircraft facility for Boeing or one of the other major military aircraft manufacturers such as Grumman Aerospace, Northrop, Lockheed or General Dynamics. The location of a major engine manufacturer such as United Technologies, General Electric Company, Teledyne, Textron, or Pratt Whitney, or even the expansion of the missile and space sector with the location of Aerojet, Hughes, LTV or Martin Marietta would also substantially increase employment.

Entry into the commercial and military aircraft sectors or related products and services may be difficult given the low level of development for these sectors in Utah. The "critical mass" of skills and infrastructure have not been developed. Chart 2 shows the structure of Utah's aerospace industry compared to the industry nationally. Utah has more than twice the concentration of activity in the space and missile sector than the national average; but the state has less than half the level of activity in the commercial aircraft, military aircraft and related products and services sectors.

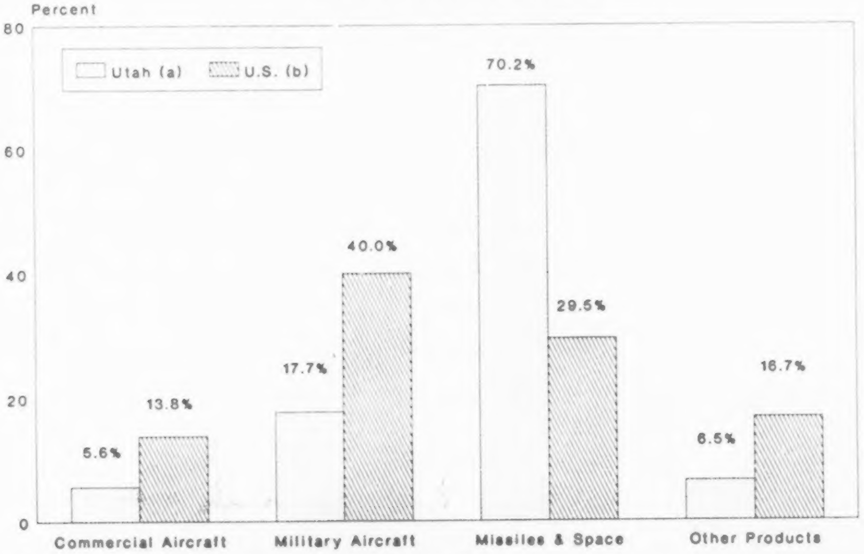
The state's ability to attract additional aerospace companies is, in part, determined by the quality of the labor force. The existing aerospace companies agree that the Utah worker has a very high work ethic; however, skilled manufacturing facilities such as Parker Hannifin and Lucas Western have experienced a shortage of machinists and machine operators. Utah's challenge is to broaden its labor advantage so as to appeal to a greater variety of aerospace firms. Moreover, the development of a skilled labor market will assist firms already in the state to expand.

National Trends and Forecasts for the Aerospace Industry

Total sales for the aerospace industry grew at a 13.2 percent annual rate between 1977 and 1987. The share of military sales has remained fairly constant for this period, accounting for 53 percent of total industry sales in 1977 and 1987. Military aircraft sales have increased at a faster rate than the commercial sector for this period, although forecasts show a slight reversal in the near term. Sales in the space sector have grown at a rate faster that the industry average at 16.4 percent.

The military sector is the largest component of the aerospace industry, as demonstrated by the data in Table 4. As the need to reduce the federal deficit continues to adversely affect military expenditures, some aerospace companies are responding to the

Chart 2
Structure of Aerospace Industry
in Utah and the Nation



Source: Bureau of Economic and Business Research, University of Utah: Aerospace Facts and Figures. 1988-1989. Aerospace Industries Association of America, Inc.

[a] Utah Employment.

[b] U.S. Sales.

shrinking defense budget by switching to the commercial market. Rohr Industries, for example, is developing its commercial aircraft engine production at the expense of its military production in response to government tightening.

The commercial sector continues to benefit from the effects of U.S. airline deregulation and the demand for moderately-sized fuel-efficient aircraft as well as overseas demand for newer versions of larger aircraft for flying longer distances. Recent trends suggest a strengthening in the commercial sector. In 1987, for example, 355 transport aircraft were delivered as compared to 188 in 1986. It should be noted that nearly 50 percent of these deliveries were exports. This is a major reason why the industry posted a positive trade balance in 1987. Boeing and McDonnell Douglas combined for more than 85 percent of the total value of civilian aircraft deliveries. Sales of commercial aircraft are expected to remain strong in the near future.

Another bright spot in the aerospace industry is the aircraft engines and engine parts sector. The strength in this sector is similar to the re-equipment cycle of the early 1980s. In a time of high operating costs and intense competition, airlines have found it necessary to stretch the life of their existing aircraft and the average age of all aircraft is nearing an all-time high. International collaboration in the engine sector is providing a catalyst for sales and is creating an industry which transcends national boundaries. Boeing, General Electric and Pratt-Whitney are the leading domestic suppliers involved in working with foreign counterparts in the development and manufacture of aircraft engines.

A heavy backlog of postponed commercial, military and scientific projects ensures robust growth for the space sector provided the Space Shuttle continues to be successful and the economy avoids a recession. Forecasts for annual growth rates in space-related products and research range from 6.5 percent to 10 percent and above.

If these trends continue, the aerospace industry will experience steady growth in the next several years. More importantly, the industry will avoid a recession. The cyclical volatility of the industry has plagued companies for many decades. If the industry can avoid a downturn, then the aerospace companies will have an opportunity to plan for the future. The severity of the aircraft business cycle has tended to so disturb the planning horizon in the industry that fewer and fewer firms are left to compete in the market. This is especially true in the case of the subcontractor market, which is exceptionally vulnerable to a drop in sales. A continued upswing in the industry will reduce the number of failures in this market and will help keep this market viable.

Summary

Missile and space programs have defined the character and determined the performance of Utah's aerospace industry. In the next decade the success of the industry in Utah will depend on: (1) the ability of local aerospace firms to offset the anticipated decline in missile programs through increased funding for space programs, and (2) state and local economic development efforts to gain major entry for the state into commercial aircraft, military aircraft and related products markets.

Table 4
Aerospace Industry Sales by Product Group
(millions)

Year	Total Sales	Aircraft			Missiles	Space	Related Products & Services
		Total	Commercial	Military			
1977	$32,199	$16,988	$ 6,183	$10,805	$ 4,108	$ 5,001	$ 6,104
1978	37,702	21,074	8,222	12,852	4,098	5,717	6,813
1979	45,420	26,382	13,227	13,155	4,778	6,545	7,713
1980	54,697	31,464	16,285	15,179	6,469	7,945	8,819
1981	63,974	36,062	16,427	19,635	7,640	9,388	10,884
1982	67,756	35,484	10,982	24,502	10,368	10,514	11,390
1983	79,975	42,431	12,373	30,058	10,269	13,946	13,390
1984	83,486	41,905	10,690	31,215	11,335	16,332	13,914
1985	96,571	50,842	13,370	36,572	11,438	18,556	16,095
1986	106,183	56,405	15,718	40,687	11,964	20,117	17,697
1987	112,066	60,290	15,465	44,825	10,195	22,903	18,678

Source: Aerospace Industries Association, 1988.

Utah Business Statistics

UTAH DATA	May 1988	May 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	20,071	NA	NA	NA	19,527	NA
New Corporations (no.)	509	525	3.1%	451	476	-5.3%
New Car, Truck, and Motor Home Sales (no.)	5,975	5,762	-3.6%	5,107	5,266	-3.0%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	70.70	71.50	1.1%	70.14	65.98	6.3%
Lambs (cwt)	67.00	64.30	-4.0%	60.38	71.08	-15.1%
Milk Wholesale (cwt)	10.80	11.30	4.6%	11.83	11.74	0.7%
Alfalfa Hay, Baled (per ton)	74.00	83.00	12.2%	80.08	71.50	12.0%
Cattle Slaughtered (live weight) (thous. of lbs.)	45,108	48,283	7.0%	47,021	44,558	5.5%
Construction						
Total Construction (thous. of dol.) 1	74,417.4	75,716.6	1.7%	68,623.7	NA	NA
Residential	40,010.3	44,094.4	10.2%	33,732.7	NA	NA
Nonresidential	22,405.7	18,786.7	-16.2%	21,979.4	NA	NA
Additions, Alterations, and Conversions	12,001.4	12,880.4	7.3%	12,915.2	NA	NA
Total Permit Construction (thous. of dol.) 2	81,386.8	78,937.7	-3.0%	73,813.7	78,464.3	-5.9%
Residential	42,774.9	45,873.4	7.2%	35,186.1	35,649.9	-1.3%
Nonresidential	24,267.8	19,975.7	-17.7%	24,794.5	28,886.5	-14.2%
Additions, Alterations, and Repairs	14,344.1	13,088.6	-8.8%	13,833.1	13,928.0	-0.7%
New Dwelling Units (no.)	589	563	-4.4%	470	499	-5.9%
Employment						
Civilian Labor Force (thous.)	744.8	763.9	2.6%	762.7	751.9	1.4%
Total Employed Persons	707.6	728.0	2.9%	728.3	709.3	2.7%
Unemployed Persons	37.2	35.9	-3.5%	34.4	42.5	-19.2%
Percent Total Labor Force	5.0	4.7	-6.0%	4.5	5.7	-20.5%
Employees on Nonagricultural Payrolls (thous. of jobs)	657.7	683.1	3.9%	668.7	646.3	3.5%
Manufacturing	98.2	101.7	3.6%	99.8	95.1	5.0%
Mining	8.6	7.7	-10.5%	8.0	8.3	-2.9%
Contract Construction	25.2	25.3	0.4%	24.7	25.4	-2.4%
Transportation, Communication, and Utilities	38.9	39.5	1.5%	39.8	38.2	4.2%
Wholesale Trade	34.8	37.2	6.9%	35.7	34.8	2.5%
Retail Trade	118.8	124.7	5.0%	122.4	118.5	3.3%
Finance, Insurance, and Real Estate	33.3	33.3	0.0%	33.3	33.7	-1.0%
Services 3	152.8	162.9	6.6%	161.1	150.4	7.1%
Federal Government	39.5	40.7	3.0%	39.6	39.5	0.4%
State Government 4	39.9	41.1	3.0%	38.8	38.1	1.8%
Local Government 4	67.7	69.0	1.9%	65.4	64.3	1.8%
Average Weekly Hours						
Manufacturing	39.8	38.7	-2.8%	40.3	40.1	0.5%
Mining	41.0	39.9	-2.7%	40.8	42.4	-3.7%
Wholesale Trade	37.1	35.0	-5.7%	36.7	38.3	-4.3%
Retail Trade	27.9	27.1	-2.9%	27.7	28.2	-1.8%
Amount of Unemployment Compensation (thous. of dol.)	5,548.0	5,134.3	-7.5%	5,365.3	6,634.5	-19.1%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,456.4	2,195.5	-10.6%	2,329.3	2,374.4	-1.9%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	253,928.1	247,349.8	-2.6%	149,054.1	146,956.6	1.4%
Sales and Use Tax	130,039.5	136,088.8	4.7%	55,303.3	50,611.0	9.3%
Motor Fuel Tax	10,557.7	10,603.5	0.4%	10,988.3	10,277.6	6.9%
Individual Income Tax	52,130.0	45,765.0	-12.2%	52,320.2	52,110.1	0.4%
Corporation Franchise Tax	6,033.0	2,913.8	-51.7%	7,138.9	5,943.6	20.1%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,297.0	NA	NA	NA	3,874.5	NA
Crude Oil (thous. of bbls.)	2,962.6	2,478.3	-16.3%	2,562.5	2,907.8	-11.9%
Natural Gas (mil. of cu. ft.)	23,908.2	24,104.0	0.8%	23,013.1	22,959.3	0.2%
Coal (thous. short tons)	1,316.0	1,498.0	13.8%	1,475.8	1,498.3	-1.5%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	806,397	871,611	8.1%	905,088	914,491	-1.0%
Highway Traffic Count Across State Lines	NA	43,017	NA	NA	NA	NA
Transient Room Taxes (thous. of dol.)	1,929.3	1,336.8	-30.7%	546.5	521.4	4.8%
Visits, State, Nat'l. Parks, Monuments (thous.)	1,406.7	1,513.7	7.6%	1,111.2	1,068.1	4.0%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	486,693	497,893	2.3%	492,998	483,443	2.0%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	180,049	185,601	3.1%	183,315	177,894	3.0%
Electric Customers (Residential)	475,395	483,723	1.8%	479,569	475,214	0.9%
Electric Customers (Commercial)	46,649	47,754	2.4%	47,379	46,380	2.2%
Natural Gas Customers (Residential & Commercial)	457,736	471,888	3.1%	464,229	451,639	2.8%
Natural Gas Customers (Industrial)	546	569	4.2%	556	549	1.2%

Utah Business Statistics

UTAH DATA	May 1988	May 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	52.9r	54.9f	3.8%	53.2	51.9	2.4%
Unemployment Rate	4.5r	4.2	-6.7%	3.9	5.1	-22.5%
Auth. Permit Construction (thous. of dol.)	11,690.9	9,825.5	-16.0%	8,294.2	10,101.6	-17.9%
New Dwelling Units (no.)	98	90	-8.2%	65	78	-16.5%
Postal Receipts (thous. of dol.)	434.3	687.4	58.3%	498.4	375.7	32.6%
Electric Customers (Residential)	47,928	49,097	2.4%	48,453	47,731	1.5%
Electric Customers (Commercial)	3,412	3,602	5.6%	3,565	3,330	7.1%
Natural Gas Customers (Residential)	50,170	51,719	3.1%	51,036	49,422	3.3%
Natural Gas Customers (Industrial)	52	57	9.6%	54	52	3.9%
Telephone Lines in Service (Mt. Bell)(Residential)	55,117	56,802	3.1%	55,958	54,958	1.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,239	11,881	5.7%	11,613	10,863	6.9%
Salt Lake County						
Non-Ag. Employment (thous.)	340.0r	351.6f	3.4%	344.6	335.1	2.8%
Unemployment Rate	4.5r	4.4	-2.2%	4.1	5.2	-22.6%
Auth. Permit Construction (thous. of dol.)	36,697.5	33,100.5	-9.8%	31,842.3	36,317.1	-12.3%
New Dwelling Units (no.)	225	186	-17.3%	178	181	-1.8%
Postal Receipts (thous. of dol.)	8,490.9	8,457.7	-0.4%	8,301.4	7,554.3	9.9%
Electric Customers (Residential)	238,697	242,876	1.8%	241,248	237,767	1.5%
Electric Customers (Commercial)	20,349	20,858	2.5%	20,641	20,149	2.4%
Natural Gas Customers (Residential)	220,632	224,667	1.8%	222,226	218,506	1.7%
Natural Gas Customers (Industrial)	236	243	3.0%	239	235	1.4%
Telephone Lines in Service (Mt. Bell)(Residential)	229,837	234,257	1.9%	232,051	228,277	1.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	110,652	112,343	1.5%	111,751	110,251	1.4%
Utah County						
Non-Ag. Employment (thous.)	78.4r	82.6f	5.4%	80.7	76.9	5.0%
Unemployment Rate	4.3r	3.9	-9.3%	3.7	5.6	-34.2%
Auth. Permit Construction (thous. of dol.)	10,484.4	10,406.3	-0.7%	11,871.3	10,662.7	11.3%
New Dwelling Units (no.)	69	79	14.5%	70	68	2.2%
Postal Receipts (thous. of dol.)	1,178.8	1,368.2	16.1%	1,312.8	989.5	32.7%
Electric Customers (Residential)	52,611	53,843	2.3%	52,716	52,703	0.0%
Electric Customers (Commercial)	5,955	5,958	0.1%	5,995	6,076	-1.3%
Natural Gas Customers (Residential)	61,323	62,964	2.7%	62,281	60,868	2.3%
Natural Gas Customers (Industrial)	66	75	13.6%	71	69	3.2%
Telephone Lines in Service (Mt. Bell)(Residential)	63,620	65,418	2.8%	65,420	63,420	3.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	19,817	21,428	8.1%	20,770	19,315	7.5%
Weber County						
Non-Ag. Employment (thous.)	62.4r	65.1f	4.3%	62.4	60.7	2.8%
Unemployment Rate	5.7r	5.1	-10.5%	4.9	6.8	-26.9%
Auth. Permit Construction (thous. of dol.)	4,867.5	6,096.2	25.2%	5,340.0	7,420.1	-28.0%
New Dwelling Units (no.)	44	62	40.9%	46	58	-21.0%
Postal Receipts (thous. of dol.)	682.1	659.5	-3.3%	684.4	630.6	8.5%
Electric Customers (Residential)	53,412	54,228	1.5%	53,846	53,159	1.3%
Electric Customers (Commercial)	4,898	5,051	3.1%	4,975	4,889	1.8%
Natural Gas Customers (Residential)	49,680	50,611	1.9%	50,156	49,242	1.9%
Natural Gas Customers (Industrial)	82	85	3.7%	84	84	-1.1%
Telephone Lines in Service (Mt. Bell)(Residential)	46,473	47,345	1.9%	46,868	46,116	1.6%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,881	12,246	3.1%	12,105	11,357	6.6%

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report.*
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture.*
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	May 1988	May 1989	% Change from: Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	4,838.5	5,20[illegible]	7.5%	5,034.8	4,672.5	7.8%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,023.3	4,395.7	9.3%	4,219.5	3,894.5	8.3%
Industrial Production Indexes (seasonally adjusted) (1977=100)	136.1	141.6	4.0%	139.7	133.0	5.0%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	426.9	467.5	9.5%	447.8	406.2	10.2%
Net Exports of Goods and Services (bil.) (qtly.)	−74.9	−52.7	−29.6%	−62.8	−100.2	−37.3%
Exports of Goods and Services (bil.) (qtly.)	532.5	623.2	17.0%	583.8	490.8	19.0%
Imports of Goods and Services (bil.) (qtly.)	607.5	675.9	11.3%	646.6	591.0	9.4%
Index of Leading Indicators (1982=100)	141.5	143.7	1.6%	144.4	140.8	2.6%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	117.5	123.8	5.4%	120.7	115.5	4.5%
CPI-U (All Urban Consumers) Food & Beverages	117.1	124.7	6.5%	121.1	115.0	5.3%
CPI-U (All Urban Consumers) Housing	117.7	122.1	3.7%	120.3	116.0	3.7%
CPI-U (All Urban Consumers) Transportation	108.1	116.0	7.3%	111.2	106.9	4.0%
CPI-U (All Urban Consumers) Medical Care	137.5	147.5	7.3%	142.7	133.5	6.9%
CPI-U (All Urban Consumers) Energy	88.7	97.4	9.8%	91.2	89.3	2.1%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	107.5	114.2	6.2%	110.4	106.2	4.0%
GNP Price Deflator (1982=100) (qtly.)	120.6	125.9	4.4%	123.5	118.8	3.9%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	121.2	123.6	2.0%	122.6	120.6	1.7%
Total Civilian Employment (mil.)	114.4	117.2	2.4%	116.1	113.6	2.2%
Unemployment Rate	5.6	5.2	−7.1%	5.3	5.8	−9.0%
Construction						
Total Construction (mil. of dol.)	24,137.5	23,796.5	−1.4%	20,463.4	21,570.6	−5.1%
Residential	11,686.1	11,388.7	−2.5%	9,878.1	9,995.6	−1.2%
Nonresidential	7,254.1	7,959.3	9.7%	6,985.7	7,617.1	−8.3%
Non-Building	5,197.3	4,448.5	−14.4%	3,599.6	3,980.4	−9.6%
New Dwelling Units (no.)	138,454	130,624	−5.7%	115,900	125,806	−7.9%
Interest Rates						
Federal Funds Rate	7.09	9.81	38.4%	8.74	6.83	27.9%
Short Term (3-month Treasury bill rate)	6.27	8.40	34.0%	7.77	5.94	30.9%
Long Term (30-year Treasury bond yields)	9.24	8.95	−3.1%	9.12	8.97	1.7%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	8.84	11.50	30.1%	10.38	8.60	20.8%
Mortgage Rates (new homes)	8.59	9.82	14.3%	9.18	8.86	3.6%

Sources: *Business Conditions Digest,* U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Business Expenditures for New Plant Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Survey of Current Business, U.S. Department of Commerce: New Home Mortgage Rates.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

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UTAH HOUSING FINANCE AGENCY: THE ECONOMIC IMPACT OF MORTGAGE PROGRAMS FOR NEW RESIDENTIAL UNITS

James A. Wood
Research Analyst

A study of the economic impact of UHFA's mortgage programs was conducted by the Bureau of Economic and Business Research, for the Utah Housing Finance Agency.[1] The objective of the study was to measure the economic impact on the Utah economy of mortgage funds provided by the Utah Housing Finance Agency (UHFA) for new residential housing units. Since its creation in 1977 the UHFA has provided permanent financing for 2,629 new apartment units and 10,589 new single-family units; or 4.6 percent of new multifamily construction activity, and 9.8 percent of new single-family construction.

The employment, income and fiscal impacts of UHFA activities have been estimated using the Input-Output Model for Utah developed by the Bureau of Economic and Business Research.[2] An important requirement of the input-output analysis should be emphasized, i.e., employment, income and fiscal impacts are limited only to mortgage funds used in the construction of new residential units.

Note: It is assumed throughout this study that the UHFA mortgage programs provided financing for 13,218 units that otherwise would not have been financed or built, i.e., the construction of these units represents an infusion of income and jobs that occurred only because of the UHFA mortgage programs.

[1] This article is condensed from the study funded by a contract between the Utah Housing Finance Agency and the Bureau of Economic and Business Research, University of Utah, "The Economic Impact of Utah Housing Finance Agency's Mortgage Purchase Programs for New Residential Housing."

[2] The development of the input-output model by the Bureau of Economic and Business Research, University of Utah has relied heavily on a data base developed by Jack Faucett Associates for the U.S. Department of Health and Human Services entitled The Multiregional Input Accounts 1977: Introduction and Summary, July 1983.

Fifty-eight percent of UHFA's mortgage purchase funds have been used for construction of new residential units and 42 percent for the purchase existing residential units. Although financing the purchase of existing residential units does have some positive economic impact it is of less significance than the economic impact of the financing new residential units.

In 1987 and 1988 UHFA accounted for approximately 20 percent of the total single-family construction activity in the state, Table 1. In those two years the average price of a UHFA-financed new home was $64,800 and $65,225 respectively, well below the average sales price of a home in Salt Lake County of $79,000, Table 2. These data indicate the role the UHFA plays in "assuring an adequate source of capital for housing for low and moderate income persons".

Employment Impact

The significant economic and social impacts described in this report have been achieved through highly innovative tax-exempt bonding programs which are totally self-supporting and represent no financial cost to the Utah taxpayer nor present any legal liability to the State of Utah for the repayment of the bonds.

Table 1

Number of Loans for New Single Family Construction Funded by UHFA Mortgage Program

Year	Value (millions)	Number Loans	Percent of Total Single-family Construction
1977	$16.7	468	2.7
1978	27.7	779	5.0
1979	21.5	538	4.3
1980	79.4	1,657	21.4
1981	(a)	--	--
1982	28.6	518	10.9
1983	151.0	2,586	29.4
1984	66.9	1,107	14.8
1985	(a)	--	--
1986	31.3	492	5.8
1987	88.4	1,363	20.9
1988	66.7	1,023	19.3
1989	3.7	58	--
Total	$582.0	10,589	9.8

[a] No UHFA single family mortgage bonds issued.

Source: Utah Housing Finance Agency

Table 2

A Comparison of Average New Home Prices of UHFA Programs, 1977-1989 (weighted average of UHFA homes)

Year	New UHFA Homes	Average Price UHFA	Average Price S.L. County	UHFA as Percent of S.L. County
1977	468	$35,593	$43,968	80.9
1978	779	35,593	51,762	68.8
1979	538	40,038	60,084	66.6
1980	1,657	47,928	68,073	70.4
1981	(a)	--	72,909	--
1982	518	55,174	76,445	72.2
1983	2,586	58,408	76,030	76.8
1984	1,107	60,428	78,200	77.3
1985	(a)	--	81,702	--
1986	492	63,625	80,112	79.4
1987	1,363	64,822	80,550	80.5
1988	1,023	65,224	79,602	81.9
1989	58	63,901	79,790	80.0
Total	10,589	--	--	--

[a] No single-family homes financed in 1981 and 1985 by UHFA.

Source: Bureau of Economic and Business Research, University of Utah; Salt Lake Real Estate Board; Utah Housing Finance Agency.

Single-family Housing

The employment impact of the UHFA's single-family housing program has been estimated for each mortgage purchase bond. Once the amount of mortgage funds for new residential construction was calculated, it was necessary to reduce this figure by the amount of land costs. Land cost is a major component of the price of a home but the purchase of land creates no jobs or income; hence, the amount of mortgage money allocated to land cost was subtracted from the mortgage funds provided by UHFA. For single-family housing, land cost was assumed to be 25 percent of the cost of the home; for multifamily housing, 15 percent. When land costs are subtracted, the remainder represents the amount of mortgage funds used to buy "bricks and mortar" and pay wages and salaries.

The amount of mortgage money provided to homebuyers of new single-family homes is given in Table 3. This table also represents the employment impact, measured in total man-years (1,860) hours. The total man-year estimate includes the direct employment plus the indirect and induced employment created by the new construction activity. Direct employment consists of the number of construction workers required to actually build the new home. Indirect and induced employment consists primarily of jobs for those supplying construction inputs, i.e., the employment required to manufacture and supply paint, cement, lumber, glass, appliances and all other construction inputs beyond direct employment.

Table 3

Employment Impact of Mortgage Purchase Funds for New-Single Family Units, 1977-1987

Year	Net New Single Family Mortgage Funds[a] (millions)	Direct Employment (man-years)	Indirect and Induced (man-years)	Total Employment Impact (man-years)
1977	$12.53	158	197	355
1978	20.78	233	290	523
1979	16.16	160	200	360
1980	59.56	532	665	1,197
1981	(b)	--	--	--
1982	21.44	172	214	386
1983	113.28	885	1,105	1,990
1984	50.17	338	472	850
1985	(b)	--	--	--
1986	23.48	168	210	378
1987	66.27	464	580	1,044
1988	50.04	346	432	778
1989	2.28	19	24	43
Total	$436.47	3,513	4,392	7,905

[a] The value of land has no economic impact on the economy; therefore, the figures in this column reflect a 25 percent reduction of total mortgage purchase funds to adjust for the value of land in the UHFA's mortgage purchase program.

[b] No single-family mortgage bonds issued in these years.

Source: Bureau of Economic and Business Research, University of Utah.

The number of indirect and induced jobs created by new construction was derived by using the residential construction employment multiplier of 2.25. For example, direct employment of 100 construction workers creates a total of 225 jobs--derived from multiplying direct employment by the residential construction multiplier. The difference between the direct employment of 100 construction workers and the total employment of 225 employees is the indirect and induced employment impact of 125 employees.

Since 1977 UHFA has provided $582 million of mortgage funds for new single-family homes. Between 1977 and 1989 the construction of these homes created a total of 7,905 jobs (Table 3).

Multifamily Housing

Since the first multifamily issue in 1978 the agency has issued over $99 million of Multifamily Mortgage Purchase Bonds. These funds have been used to build approximately 2,600 rental units. The construction of these units has had a total employment impact of 1,764--784 in direct employment and 980 in indirect and induced employment (Table 4).

In summary, the UHFA has provided mortgage funds for over 13,200 new single-family and multifamily units in Utah. The construction activity required to build these new units has led to an additional 9,669 jobs for the Utah economy.

4,297	Direct Employment
5,372	Indirect and Induced Employment
9,669	Total Employment Impact

Methodology

The number of jobs created by UHFA mortgage funds was based on a relationship between employee hours and contract cost (mortgage funds provided by UHFA less estimated land cost). The Bureau of Labor Statistics, U.S. Department of Labor, calculated that in 1982 every $1,000 spent on construction creates 14.9 man-hours in employment for single-family construction and 17.4 man-hours of employment for multifamily housing.

The ratio of man-hours per construction cost changes every year depending on inflation and productivity. An annual deflator was calculated using construction cost data from the Bureau of the Census. Productivity was held constant because recent research on productivity in the construction industry indicates declining productivity. Declining productivity would lead to an increase in the economic impact of UHFA programs, since under the assumption of declining productivity, it would take more man-hours to accomplish the same level of output. A constant productivity rate was also assumed since most of the study period includes the recession years of the 1980's when "inefficient firms and workers dropped out of the industry on the downswing,"[3] so that the decline in productivity was at least reduced if not halted.

Table 4
Employment Impact of Mortgage Purchase Funds for New Multifamily Units, 1977-1989

Year	Net Multifamily Mortgage Funds[a] (millions)	Direct Employment (man-years)	Indirect and Induced (man-years)	Total Employment Impact (man-years)
1977	(b)	--	--	--
1978	$3.3	43	53	96
1979	9.4	108	135	243
1980	(b)	--	--	--
1981	(b)	--	--	--
1982	22.6	211	264	475
1983	9.6	87	109	196
1984	(b)	--	--	--
1985	39.3	335	419	754
1986	(b)	--	--	--
1987	(b)	--	--	--
1988	(b)	--	--	--
1989	(b)	--	--	--
Total	$84.2	784	980	1,764

[a]The value of land has no economic impact on the economy; therefore, the figures in this column reflect a 15 percent reduction of total mortgage purchase funds to adjust for the value of land in the UHFA's mortgage purchase program.

[b]No multifamily mortgage purchase bonds were issued in these years.

Source: Bureau of Economic and Business Research, University of Utah.

The construction cost index and man-hours/ $1,000 of construction for deriving economic impact appear in Table 5.

Table 5
Construction Cost Index and Man-Hours/ $1,000 of Construction, 1977-1989

Year	Cost Index	Man-hours/ $1,000 Single-Family	Man-hours/ $1,000 Multifamily
1977	63.6	23.4 hrs	27.3 hrs.
1978	71.5	20.8	24.3
1979	80.9	18.4	21.5
1980	89.7	16.6	19.4
1981	97.1	15.3	17.9
1982	100.0	14.9	17.4
1983	102.6	14.5	16.9
1984	106.4	14.0	16.4
1985	109.5	13.6	15.8
1986	111.8	13.3	15.6
1987	114.3	13.0	15.2
1988	116.0	12.8	15.0
1989	116.6	12.8	14.9

Source: Bureau of Economic and Business Research, University of Utah.

Income Impact

Mortgage funds provided by the UHFA not only create new jobs but also generate additional wage and salary payments for the Utah economy. The income impacts are divided into two categories: (1) direct income (wages and salaries paid to contractors, laborers, etc.) and (2) indirect and induced income (primarily wage and salary payments to suppliers of products and services for the residential construction sector). The income impacts have been calculated for each Mortgage Purchase Bond.

The methodology described below was applied to each bond issue to determine the total income impact. For example, in 1977 the UHFA Single Family Mortgage Purchase Bond provided $16.7 million for new single-family homes. Part of the purchase price of each new home is land cost. Land requires no income payments of any kind but its cost represents approximately 25 percent of the price of a single-family home and 15 percent for multifamily housing. Therefore, $4.17 million of the $16.7

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[3]Cremeans, J.E., "Productivity in the Construction Industry", Construction Review, May-June 1981, pg. 6, Department of Commerce, Bureau of Economic Analysis.

million used in the 1977 issue was allocated to land costs, leaving $12.5 million in mortgage funds as the income impact.

The portion of this $12.5 million that ends up as wages or salaries, i.e., direct income, was determined by using the income coefficient of .306. By applying this coefficient to the $12.5 million, the direct income to the construction sector from the 1977 issue was $3.83 million. Once direct income was calculated, it was then possible to estimate the total income impact by using the income multiplier of 1.95 for residential construction, as follows: $3.83 million x 1.95 = $7.47 million in total income impact.

Therefore, the total income impact of the 1977 issue is comprised of:

$3.83 million Direct Income
$3.63 million Indirect and Induced Income
$7.47 million Total Income Impact

The annual income impacts for single-family and multifamily activities are given in Tables 6 and 7, page 8. Since 1977 the UHFA has provided mortgage funds for 13,218 new single-family and multifamily units in Utah and the construction activity required to build the new units has resulted in an additional $302.8 million of income for the state economy.

$155.4 million Direct Income
$147.4 million Indirect and Induced Income
$302.8 million Total Income Impact

Fiscal Impact

The UHFA's mortgage programs have financed 13,218 new residential units in addition to 11,416 existing residential units since 1977. The new construction activity required to build these units has added an additional $302.8 million in income to the Utah economy, which in turn has led to an increase in tax revenues for the state and local communities. Using the Utah Input-Output Table plus personal income and tax revenue data, the annual fiscal impacts of UHFA programs have been estimated. In the past ten years the wages and salaries generated by the UHFA program have resulted in an increase in tax revenues of $35.7 million——$32.1 million in state tax revenues and $3.6 million in local revenues (Table 8).

Table 8
The Fiscal Impacts of UHFA Mortgage Programs
(new construction only)

Type of Tax	Tax Revenue
Sales Tax	$11,809,000
Individual Income Tax	10,295,000
Other State Tax	9,992,000
Local Sales Tax	3,571,000
One-Time Fiscal Impact	35,667,000
Annual Property Tax Revenues (1989)	6,344,800
Est. Average Value of Home	60,150
Est. Average Value of Apartment	20,000

Source: Computed by Bureau of Economic and Business Research, University of Utah.

In addition to income tax revenues, local property tax revenues have also increased as a result of UHFA programs. The average value in 1989 of the 10,589 new home construction figures financed by UHFA mortgage programs is $60,150, weighted and adjusted for inflation. The average value of a new multifamily unit is estimated at $20,000. At these values and given the average state-wide property tax for a primary resident and multifamily unit, the residential construction financed by UHFA generates $6.3 million annually in local property taxes; $5.7 million for single-family homes and $644,800 for multifamily units, Table 8.

Summary

A summary table outlines the economic impact of the programs and activities of the Utah Housing Finance Agency.

Summary of Economic Impact
1977-1989

	Funds (millions)	Units	Income Impact (millions)	Employment Impact
Single-family	$582	10,589	$260.4	7,900
Multifamily	$ 99	2,629	$ 42.4	1,770
Total	$681	13,218	$302.8	9,670

Fiscal Impact

Income Tax	$10.3 million
Sales Tax	$11.8 million
Other Taxes	$ 9.9 million
Other Local Taxes	$ 3.5 million
Local Property Tax (Annual)	$ 6.3 million annually

Utah Business Statistics

UTAH DATA	Jun. 1988	Jun. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	20,389	22,068	8.2%	21,443	19,877	7.9%
New Corporations (no.)	462	466	0.9%	451	472	-4.4%
New Car, Truck, and Motor Home Sales (no.)	5,310	5,233	-1.5%	5,101	5,251	-2.9%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	67.30	70.00	4.0%	70.37	66.05	6.5%
Lambs (cwt)	58.10	65.50	12.7%	60.99	69.52	-12.3%
Milk Wholesale (cwt)	10.50	11.40	8.6%	11.90	11.67	2.0%
Alfalfa Hay, Baled (per ton)	75.00	79.00	5.3%	80.42	72.00	11.7%
Cattle Slaughtered (live weight) (thous. of lbs.)	46,514	50,642	8.9%	47,365	45,143	4.9%
Construction						
Total Construction (thous. of dol.) 1	94,550.2	83,104.2	-12.1%	67,669.8	NA	NA
Residential	46,810.2	42,998.9	-8.1%	33,411.4	NA	NA
Nonresidential	31,824.2	26,823.2	-15.7%	21,562.7	NA	NA
Additions, Alterations, and Conversions	15,915.8	13,282.2	-16.5%	12,695.8	NA	NA
Total Permit Construction (thous. of dol.) 2	103,675.8	105,034.9	1.3%	73,927.0	79,186.1	-6.6%
Residential	50,129.0	43,304.9	-13.6%	34,617.4	35,634.7	-2.9%
Nonresidential	36,071.1	43,498.5	20.6%	25,413.4	29,559.8	-14.0%
Additions, Alterations, and Repairs	17,475.1	18,231.5	4.3%	13,896.1	13,991.6	-0.7%
New Dwelling Units (no.)	712	547	-23.2%	456	498	-8.4%
Employment						
Civilian Labor Force (thous.)	760.2	783.0	3.0%	765.4	751.2	1.9%
Total Employed Persons	724.4	748.5	3.3%	731.1	709.9	3.0%
Unemployed Persons	35.8	34.5	-3.6%	34.3	41.4	-17.1%
Percent Total Labor Force	4.7	4.4	-6.4%	4.5	5.5	-18.8%
Employees on Nonagricultural Payrolls (thous. of jobs)	664.4	690.7	4.0%	671.5	648.1	3.6%
Manufacturing	99.6	103.2	3.6%	100.3	95.7	4.9%
Mining	8.5	7.7	-9.4%	7.9	8.3	-4.1%
Contract Construction	26.8	27.2	1.5%	24.9	25.2	-1.5%
Transportation, Communication, and Utilities	39.6	40.4	2.0%	39.9	38.4	4.0%
Wholesale Trade	35.4	37.9	7.1%	36.0	34.9	3.1%
Retail Trade	120.1	126.9	5.7%	123.1	118.6	3.7%
Finance, Insurance, and Real Estate	33.4	33.3	-0.3%	33.3	33.6	-1.0%
Services 3	156.1	166.8	6.9%	162.0	151.5	6.9%
Federal Government	39.8	40.1	0.8%	39.7	39.4	0.7%
State Government 4	38.4	39.7	3.4%	38.9	38.2	2.1%
Local Government 4	66.7	67.5	1.2%	65.5	64.4	1.8%
Average Weekly Hours						
Manufacturing	40.0	39.6	-1.0%	40.2	40.1	0.2%
Mining	41.8	41.3	-1.2%	40.8	42.5	-4.1%
Wholesale Trade	38.3	35.1	-8.4%	36.3	38.3	-5.1%
Retail Trade	28.5	27.5	-3.5%	27.6	28.2	-2.0%
Amount of Unemployment Compensation (thous. of dol.)	5,218.5	4,118.9	-21.1%	5,295.0	6,454.8	-18.0%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,441.0	2,197.9	-10.0%	2,309.0	2,371.4	-2.6%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	182,556.5	167,585.7	-8.2%	147,806.5	149,107.3	-0.9%
Sales and Use Tax	68,245.8	71,666.5	5.0%	55,588.4	51,101.6	8.8%
Motor Fuel Tax	20,998.8	19,463.2	-7.3%	10,860.3	10,780.8	0.7%
Individual Income Tax	47,867.9	27,903.4	-41.7%	50,656.5	53,272.7	-4.9%
Corporation Franchise Tax	10,309.4	12,619.9	22.4%	7,331.5	5,846.0	25.4%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,425.0	NA	NA	NA	3,926.2	NA
Crude Oil (thous. of bbls.)	2,739.6	2,052.5	-25.1%	2,505.3	2,894.8	-13.5%
Natural Gas (mil. of cu. ft.)	22,572.9	16,460.1	-27.1%	22,503.7	23,177.9	-2.9%
Coal (thous. short tons)	1,470.0	1,362.0	-7.3%	1,466.8	1,521.8	-3.6%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	948,592	1,111,024	17.1%	918,624	917,382	0.1%
Highway Traffic Count Across State Lines	NA	40,741	NA	NA	NA	NA
Transient Room Taxes (thous. of dol.)	709.5	1,054.5	48.6%	575.2	532.0	8.1%
Visits, State, Nat'l. Parks, Monuments (thous.)	1,966.3	1,920.0	-2.4%	1,107.3	1,067.2	3.8%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	485,999	497,447	2.4%	493,952	484,174	2.0%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	180,630	186,818	3.4%	183,830	178,340	3.1%
Electric Customers (Residential)	474,216	485,084	2.3%	480,474	475,742	1.0%
Electric Customers (Commercial)	46,672	47,611	2.0%	47,458	46,414	2.2%
Natural Gas Customers (Residential & Commercial)	456,898	471,678	3.2%	465,461	452,742	2.8%
Natural Gas Customers (Industrial)	544	570	4.8%	558	548	1.8%

Utah Business Statistics

UTAH DATA	Jun. 1988	Jun. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	53.8r	55.9f	3.9%	53.4	52.0	2.7%
Unemployment Rate	4.5r	4.2	-6.7%	3.9	5.0	-21.1%
Auth. Permit Construction (thous. of dol.)	12,139.4	23,074.8	90.1%	9,205.5	10,052.5	-8.4%
New Dwelling Units (no.)	94	78	-17.0%	63	75	-15.8%
Postal Receipts (thous. of dol.)	315.8	530.0	67.8%	516.2	373.1	38.4%
Electric Customers (Residential)	47,858	48,416	1.2%	48,499	47,792	1.5%
Electric Customers (Commercial)	3,441	3,519	2.3%	3,572	3,344	6.8%
Natural Gas Customers (Residential)	50,609	51,742	2.2%	51,131	49,583	3.1%
Natural Gas Customers (Industrial)	52	56	7.7%	54	52	4.5%
Telephone Lines in Service (Mt. Bell)(Residential)	55,232	56,859	2.9%	56,094	54,981	2.0%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,358	11,958	5.3%	11,663	10,928	6.7%
Salt Lake County						
Non-Ag. Employment (thous.)	343.3r	357.6f	4.2%	346.0	335.9	3.0%
Unemployment Rate	4.5r	4.2	-6.7%	4.0	5.1	-21.4%
Auth. Permit Construction (thous. of dol.)	40,128.6	33,780.4	-15.8%	31,313.2	36,027.0	-13.1%
New Dwelling Units (no.)	259	181	-30.1%	171	180	-4.7%
Postal Receipts (thous. of dol.)	7,583.0	7,592.0	0.1%	8,302.1	7,620.7	8.9%
Electric Customers (Residential)	238,353	244,209	2.5%	241,736	238,106	1.5%
Electric Customers (Commercial)	20,357	20,721	1.8%	20,672	20,196	2.4%
Natural Gas Customers (Residential)	220,007	224,162	1.9%	222,573	218,805	1.7%
Natural Gas Customers (Industrial)	235	245	4.3%	240	235	2.0%
Telephone Lines in Service (Mt. Bell)(Residential)	229,612	234,287	2.0%	232,440	228,559	1.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,113	113,044	1.7%	111,912	110,370	1.4%
Utah County						
Non-Ag. Employment (thous.)	80.1r	83.7f	4.5%	81.4	77.5	5.1%
Unemployment Rate	4.4r	4.5	2.3%	3.7	5.4	-30.9%
Auth. Permit Construction (thous. of dol.)	19,406.8	19,792.8	2.0%	11,903.4	11,169.8	6.6%
New Dwelling Units (no.)	110	105	-4.5%	69	69	-0.1%
Postal Receipts (thous. of dol.)	1,150.3	1,319.5	14.7%	1,326.9	1,010.1	31.4%
Electric Customers (Residential)	52,168	53,728	3.0%	52,846	52,865	0.0%
Electric Customers (Commercial)	5,981	5,918	-1.1%	5,990	6,025	-0.6%
Natural Gas Customers (Residential)	61,092	62,874	2.9%	62,430	60,993	2.4%
Natural Gas Customers (Industrial)	65	73	12.3%	71	68	4.5%
Telephone Lines in Service (Mt. Bell)(Residential)	63,645	65,481	2.9%	65,573	63,629	3.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	19,690	21,598	9.7%	20,929	19,418	7.8%
Weber County						
Non-Ag. Employment (thous.)	62.5r	64.8f	3.7%	62.7	60.9	3.1%
Unemployment Rate	5.8r	5.3	-8.6%	4.9	6.6	-25.1%
Auth. Permit Construction (thous. of dol.)	10,053.3	7,740.4	-23.0%	5,147.3	7,468.7	-31.1%
New Dwelling Units (no.)	69	44	-36.2%	44	58	-24.6%
Postal Receipts (thous. of dol.)	591.3	596.2	0.8%	684.8	629.5	8.8%
Electric Customers (Residential)	53,337	54,063	1.4%	53,906	53,220	1.3%
Electric Customers (Commercial)	4,932	4,970	0.8%	4,978	4,897	1.7%
Natural Gas Customers (Residential)	49,698	50,440	1.5%	50,218	49,335	1.8%
Natural Gas Customers (Industrial)	82	86	4.9%	84	84	-0.3%
Telephone Lines in Service (Mt. Bell)(Residential)	46,476	47,345	1.9%	46,940	46,161	1.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,970	12,288	2.7%	12,132	11,438	6.1%

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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Table 6

Income Impact of New Single-family Mortgage Program, 1977-1989 (millions)

Year	New Construction Loans	Direct Income Impact	Indirect, Induced Income Impact	Total Income Impact
1977/78	$44.4	$10.2	$9.7	$19.9
1979	21.5	4.9	4.6	9.5
1980	79.4	18.2	17.3	35.5
1981	(a)	(a)	(a)	(a)
1982	28.6	6.6	6.2	12.7
1983	151.0	34.6	32.9	67.5
1984	66.9	15.3	14.5	29.8
1985	(a)	(a)	(a)	(a)
1986	31.3	7.1	6.8	14.0
1987	88.4	20.2	19.3	39.5
1988	66.7	15.3	14.6	29.9
1989	3.7	0.9	0.8	1.7
Total	$582.0	$133.6	$126.8	$260.4

[a] No single-family mortgage bonds issued in these years.

Source: Bureau of Economic and Business Research, University of Utah.

Table 7

Income Impact of New Multifamily Mortgage Program, 1978-1989 (millions)

Year	New Construction Loans	Direct Income Impact	Indirect, Induced Income Impact	Total Income Impact
1978	$3.3	$0.8	$0.8	$1.6
1979	9.4	2.4	2.3	4.7
1980	(a)	--	--	--
1981	(a)	--	--	--
1982	22.6	5.9	5.5	11.4
1983	9.6	2.5	2.3	4.8
1984	(a)	--	--	--
1985	39.3	10.2	9.7	19.9
1986	(a)	--	--	--
1987	(a)	--	--	--
1988	(a)	--	--	--
1989	(a)	--	--	--
Total	$84.2	$21.8	$20.6	$42.4

[a] No multifamily mortgage bonds were issued in these years.

Source: Bureau of Economic and Business Research, University of Utah.

Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

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Capital Availability in Utah

Jan Crispin-Little, Research Analyst

One of the most challenging problems faced by almost every business owner/operator is meeting the capital needs of a small or expanding business. In some instances, the company's capital requirements are small and can be handled by the owner's personal funds, or with cash flow. However, a more common scenario is one in which the firm's capital needs far exceed what can be generated by either of the aforementioned sources. Entrepreneurs frequently invest all of their expendable capital at the onset and then resort to borrowing from family and friends in order to keep the firm afloat. Cash flow is seldom adequate to fund the purchase of expensive equipment, or to finance growth in production and payroll.

Making the financial structure work while managing the company's expansion and meeting the customers needs is a difficult and frustrating experience for most entrepreneurs. Owners and managers of new and growing companies are often surprised and even annoyed that investors and lenders want detailed information in the form of business plans and financial reports that have not been prepared. In addition, equity investors typically demand an ownership position in the company, while banks and other lending institutions want collateral (houses, property, or equipment) that carries a market value in excess of the requested loan amount.

Indeed, learning the lessons of the financial market place may come as an unpleasant eye-opener to many business owners who feel such requests and requirements are unreasonable. Frustrations often lead to complaints about the demands of lenders and investors, and suggestions that money for business expansion, especially small business expansion, is not readily available in Utah. Furthermore, it is charged that what is available is extremely difficult to secure because Utah bankers are too conservative. Conversely, bankers indicate that business owners expect too much too soon. Owners approach the bank very early on in their credit needs, perhaps even before the company has an established track record.

Some individuals, sympathetic to the plight of the entrepreneur, have suggested that the state or local governments step in and become an investor in, or lender to small businesses, as a way to solve the perceived capital inequities. Such suggestions are often controversial and have not been uniformly accepted by individuals in the financial community, or by business owners who have successfully solved their financial problems; albeit there are some public efforts that do have broad-based support.

This article is a summary of a study, *Capital Availability in Utah*, completed by the Bureau of Economic and Business Research, University of Utah, December 1989. The support of the Utah State Division of Business and Economic Development is gratefully acknowledged. The conclusions, however, are those of the author.

Although there is no conclusive evidence that Utah bankers are more conservative than their out-of-state counterparts, or that capital is unavailable for small business expansion, the frequency of the complaints warranted closer examination of the issues. To examine these concerns, the Bureau of Economic and Business Research (BEBR), University of Utah, was asked by the Utah State Division of Business and Economic Development to look at the problems and review the suggestions that have been made to date. A three-fold approach was used.

First, previous studies completed by BEBR addressing the issue of capital flows in Utah were reviewed and banking data contained in those reports updated. These data were supplied by the Division of Financial Institutions and the Federal Reserve Bank. Unfortunately, capital flows cannot be measured in any quantitative manner; the data simply do not exist. Data are available, however, on the deposits, loans, and loan portfolio distribution of local institutions. These data give a general indication as to the sources and uses of capital in the state. Alternative sources of capital and the financial services that are available to small businesses have also been identified and described.

Second, a task force was appointed by Lynn Blake, Director of the Division of Business Development. This task force included representatives from the Utah Bankers Association, Deseret Certified Development Corporation, Small Business Development Center, Utah Ventures, and Rural Utah or Small Cities, Inc. Finally, with the concurrence and advice of task force members, a series of focus groups were conducted.

What Is a Focus Group?

A focus group is simply a group of experts with extensive experience and knowledge on a particular subject. These individuals are given the opportunity to share their experiences, refine their perceptions and knowledge, and voice their concerns in an open-ended discussion environment. A moderator begins the discussion and keeps it centered on a specific topic. This forum allows the participants to build on each other's knowledge and to express their opinions on the problems and proposals under consideration.

Four focus group sessions were held during the months of August and September. The first group included the senior loan officers and managers of non-performing loans at both large and small commercial banks operating in the State of Utah. The second group consisted of individuals who provide non-banking financial services or consulting services to small businesses that are trying to secure capital. Venture capitalists, administrators of guaranteed loan programs, accountants, and consultants were represented in this group. The final groups (three and four) involved small business owners or managers who have experienced difficulty in raising or securing capital for business expansion. These were individuals with proven track records and viable, on-going businesses.

The participants in each group were asked to do two things: first, to discuss openly and frankly their perceptions of the problems faced by owners of small, Utah-based businesses in attempting to secure capital; and second, to comment on recommendations that the state develop programs or enact initiatives to resolve these problems. Each participant received a transcript from his or her focus group for review and study. However, the confidentiality of individual opinions and comments was, and will continue to be protected.

The study is presented in three sections. The first is an analysis of banking and other financial data. The second section details the conclusions or findings that emerged from the focus groups. In several instances, direct quotes have been taken from the transcripts of those groups, but in no instance has the source of the opinion been identified. The final section provides a series of recommendations that were formulated by reviewing the responses of the focus group participants.

Sources of Capital for Utah's Small Businesses

In Utah's early years, the amount of capital that was available to both individuals and businesses was almost always limited to the savings of pioneers, credit extended by frontier merchants, and the coin and currency minted and printed by the Mormon Church. Consequently, money was in short supply. This situation changed rapidly as population and commercial growth created an increasing demand for capital that could no longer be supplied by these simple sources. Today, Utah residents have access to capital that is imported from many areas outside the state. In fact, it is a widely-held belief that capital markets are the most efficient of all markets.

The availability of capital is, to a great degree, a function of savings. Utah's capital markets depend on the savings of residents and businesses. However, these savings are insufficient to meet the needs of Utah's economy, so national capital markets are tapped in order to provide the monies necessary for economic expansion. In the sense that the market for money is a global one, Utah cannot be considered to be capital poor. But, to the extent that Utah does import capital from outside sources, it can be considered capital short.

Analyzing the impact of this situation on small businesses in Utah would be ideal; however, identifying and quantifying the flows of debt and equity capital across state borders is impossible. A general trend analysis must suffice as an alternative. In this context, financial data from a variety of sources have been accumulated and described. To the extent possible, the impact of these trends on small firms has also been identified.

Debt Capital and Small Business

Debt capital (commercial and industrial loans) is the primary source of debt financing for small businesses in Utah. Whereas large corporations have access to national capital markets, small businesses, due to their size and lack of financial sophistication, are usually excluded from these markets. For such enterprises, Utah's commercial banks are the most important source of capital. Conversely, small businesses are not the only customers served by the commercial banks. Rather, small business owners compete with a variety of individuals and organizations for capital. Table 1 shows the portfolio distribution of Utah's commercial banks and selected surrounding states.

Table 1

Portfolio Analysis of Commercial Banks, 1988
Utah and Surrounding States
(percentages)

	Real Estate	Commercial/ Industrial	Consumer	Agri-culture
Arizona	44.10	24.65	21.11	2.52
California	37.87	24.33	14.71	1.29
Idaho	25.94	27.22	27.77	11.89
Oregon	30.91	38.01	21.88	2.87
Utah	40.06	23.36	26.93	1.58
Nevada	16.71	14.73	66.25	0.17

Source: Federal Reserve Bank of San Francisco, *Regional Banking Data,* December 31, 1986 - December 31, 1988.

As shown in Table 1, in 1988, commercial banks in Utah had approximately 40 percent of their loan portfolio in real estate loans. The data provide some evidence that banks in Utah have been more inclined to engage in loans secured by real estate than banks in surrounding states.

The ratio of real estate loans as a percentage of total loans has remained fairly constant over the past five years. The majority of these are long-term, fixed-rate loans. In comparison, the ratio of commercial/industrial loans as a percent of total loans made over the same period has been steadily declining. These are typically short-term loans (Table 2).

Table 2

Portfolio Ratio Analysis
Utah, 1984 - 1988
(percentages)

	Real Estate	Commercial/ Industrial	Consumer	Agri-culture
1984	40.71	28.79	21.89	1.78
1985	39.73	26.60	22.03	1.69
1986	38.46	25.45	25.62	1.50
1987	38.77	24.78	25.85	1.34
1988	40.06	23.36	26.93	1.58

Source: Federal Reserve Bank of San Francisco, *Regional Banking Data,* December 31, 1986 - December 31, 1988.

In 1988, the value of commercial and industrial loans made by commercial banks totaled $1.68 billion, only slightly higher than the total value in 1984 ($1.67 billion). Commercial and industrial loans hit a peak in 1986 when they totaled $1.77 billion. Of the surrounding states in the Federal Reserve Twelfth District, only Nevada and Idaho banks provided less capital for commercial/industrial needs than did commercial banks in Utah (Table 3).

Table 3

Value of Commercial/Industrial Loans
1985-1988, Utah and Surrounding States
(millions of dollars)

	1985	1986	1987	1988[p]
Arizona	$ 4,680	$ 4,916	$ 5,107	$ 4,902
California	49,247	53,538	50,237	50,519
Idaho	1,345	1,293	1,314	1,298
Nevada	988	1,167	1,295	1,516
Oregon	4,071	4,268	4,422	4,777
Utah	1,734	1,777	1,761	1,681

[p] Preliminary.
Source: Federal Reserve Bank of San Francisco, *Regional Banking Data,* December 31, 1986 - December 31, 1988.

Using data obtained from the Utah Department of Financial Institutions, it appears that banks with less than $25 million in assets, and those with more than $1 billion in assets are slightly more inclined to make business loans. Because the lending limits of small banks are lower than those of larger commercial banks, it is very likely that banks with less than $25 million in assets may have more interest in lending to small businesses (Table 4). Banks with more than $1 billion in assets can more readily meet the capital needs of large companies.

Table 4
Distribution of Loan Portfolio by Asset Size
(percentages)

	Banks with Total Assets of:			
Loan Type	Less than $25 million	$25 to $100 million	$100 million to $1 billion	$1 billion or more
Real Estate	37.4	55.8	46.8	36.0
Commercial	26.9	20.3	23.3	27.3
Consumer	25.7	17.4	25.1	22.4
Agriculture	8.8	3.9	1.0	1.6

Note: Totals may not add to 100% as not all loan types have been included here.
Source: Calculated by the Bureau of Economic and Business Research from data provided by the Utah Department of Financial Institutions.

Deseret Certified Development Company

The Deseret Certified Development Company (DCDC) is a licensee of the Small Business Administration. It participates primarily in the SBA 504 loan program, but also administers other public sector finance programs around the state. DCDC is a certified state-wide lender and has loaned more than $37.0 million to firms throughout Utah; approximately one-third of DCDC's loans are in rural parts of the state. Due to the constraints on the loan programs administered by DCDC, fixed-asset financing is the most readily available; land, building and/or equipment purchases may be financed along with facility construction, renovation or remodeling. The SBA 504 program has many advantages. Up to 40 percent of the funding is provided by SBA at a fixed rate that is generally below market interest rates, the loans are long-term, and usually require a low down payment.

Equity Capital and Small Business

With $10.5 million under management, Utah Ventures is the only venture firm based in Utah. To date, Utah Ventures has invested approximately $2 million in technology-oriented companies and has been influential in attracting an additional $18 million in outside investments for Utah-based companies. Utah organizations that have invested money in the fund include the Utah State Retirement Fund, First Security Bank, Valley Bank, Key Bank, West One Bank, Questar Development, and several local prominent individuals. In addition to providing venture money to high technology companies, Utah Ventures acts as a feeder fund for larger venture companies located outside the state.

With 15 out-of-state venture investors, Utah Ventures provides a window of opportunity to large venture groups that are interested in investing in a fledgling Utah-based company.

While Utah's supply of venture capital may be limited, the venture capital market is global. Few, if any, of the large venture funds limit all but the very smallest of their investments to companies located close to their home base. Venture capitalists are continually looking for good investments. However, the market is maturing. On average, large venture funds will invest in five to seven new companies each year. And, whereas venture investors were eager to become involved with early-stage companies just a few years ago, a recent study by *Inc. Magazine* indicates that they are now leaning more heavily toward investments in second-stage and later-stage expansion (Table 5).

Table 5
Venture Capital Investments
1987

Financing Stage	Percent of 1987 Funds Invested
Seed or Startup	13.0
Other Early Stage	15.0
Second-stage Expansion	31.0
Later-stage Expansion	23.0
LBO/Acquisition	11.0
Other	7.0

Source: *Venture Capital Yearbook*, Venture Economics, 1988. (New York, New York).

Small Business Investment Company

The Small Business Investment Company (SBIC) is the equity financing arm of the SBA, and is the only program sponsored by the Federal Government that makes venture and equity capital available to small businesses. SBIC financing is aimed at small businesses with risk and return characteristics and financing needs that normally prohibit them from securing capital from traditional sources. Although there is not an active SBIC in Utah, there is a signficant amount of interest in establishing an SBIC in the state, with several groups actively investigating the requirements and potential of forming such a financing mechanism.

Despite the absence of an active SBIC, Utah companies have been successful in securing capital under this program. From 1983 through 1988, 99 Utah companies received a total of $11.0 million from SBICs located throughout the United States (Table 6).

Table 6

SBIC Financings Utah, 1983 - 1987

	Number of Companies	Total Dollars
1983	4	$1,436,500
1984	10	1,932,385
1985	3	1,100,010
1986	23	2,641,044
1987	33	2,313,337
1988	26	1,631,145
Total	99	$11,014,821

Source: *SBIC Digest*, October 1989, Small Business Administration, (Washington, D. C.).

Wayne Brown Institute

The Wayne Brown Institute is a privately-funded organization that provides training and workshops for the advanced technology entrepreneur. One example of the important programs offered to entrepreneurs is the venture capital conference that brings together innovators and potential investors. This conference provides a forum where entrepreneurs can present their companies to a variety of venture capitalists. Company owners are contacted by the investor depending upon the level of interest generated during the presentation. It also provides a network of contacts for recruiting venture capitalists who are interested in advanced technology.

Utah Technology Finance Corporation

The Utah Technology Finance Corporation (UTFC) is quasi-equity investor for startup and early-stage companies. Established in 1983, it is a public, non-profit organization that finances innovative research projects that have a great likelihood of leading to commercially successful projects. Seed capital funding up to $50,000 is available through UTFC's Small Business Innovation Program. The award must be repaid by a 3 percent royalty on gross sales of any product or process that results from the sponsored project. Generally, no more than three times the funding amount will be sought. To date, 70 Utah companies have been selected to receive awards totaling $3.5 million.

UTFC also administers a participating loan program for small, technology-based, high growth companies. Under this program, UTFC provides a company with 30 percent of the requested loan amount (up to $30,000) on a first-in, last-out basis. A participating bank provides the remainder. UTFC's portion of the loan is treated as equity.

Utah Small Business Development Center - EPAS Program

The Utah SBDC has a special program for high growth potential businesses called Entrepreneurial Professional Assistance Service (EPAS). EPAS has provided assistance to companies in establishing proper valuation methods and in negotiating and structuring venture partner arrangements. The EPAS service also provides assistance in the preparation of business and marketing plans, and assists in the preparation of company presentations to the Wayne Brown Institute's Venture Capital conference, as well as for other funding sources.

Findings from the Focus Groups

The findings growing out of the focus groups were many, with a diversity of opinions expressed on a variety of issues. Not every group arrived at the same conclusions; indeed, opinions varied widely among individual group members. In spite of this, several important issues clearly evolved. These have been developed at some length in this report.

Utah's Growing Network

Without exception, the consensus of each focus group was that Utah has made significant progress in the area of business financing, albeit this progress may not have come about as quickly as some would like. As few as 15 years ago, Utah's high technology sector was virtually nonexistent. No venture capital funds were available locally and the number of alternative financing sources was limited. Presently, Utah is home to a $10.5 million venture fund. Programs such as the Utah Technology Finance Corporation have been successful in attracting companies outside of Utah. As one successful entrepreneur explained:

> *We brought our business to Utah from Colorado. Over in Denver, even with all the capital they had, there was not one program in the whole state, at that time, either publicly funded or privately funded, such as the SBIP here in this state. There was nothing. No seed money in Colorado whatsoever.*

For its size, Utah has done quite well in developing a network of organizations to help small businesses grow. In addition to UTFC, three other programs received high marks from the participants. These were the Deseret Certified Development Company, Small Business Development Center and Wayne Brown Institute. All work in tandem to provide capital and consulting services to Utah's small businesses.

The Small Business Development Center (SBDC) is an SBA program that has proven to be extremely popular with small business entrepreneurs. SBDC consultants provide management assistance to small businesses and to entrepreneurs who wish to start new businesses. SBDC provides guidance to entrepreneurs in the areas of long-range planning, marketing, business plan preparation; and most importantly, it helps business owners understand the importance of management and financial planning in the business operation. They do not become involved in the actual financing side of the equation.

Financial Problems Are Most Difficult

Solving the financial problems of a small and growing company continues to be one of the most difficult challenges that entrepreneurs must face. Again and again, business owners voiced their concerns and described their hardships in attempting to finance the growth of their companies while at the same time managing the business. Several felt that resolving those financial challenges was 100 times more difficult that overcoming any other problem in the company. One entrepreneur explained that although he was able to secure a loan from a local bank, it was for far less than he needed. In his opinion, his company would be doubly better off and more stable if he had been able to secure more money. Instead, he is hoping to expand with cash flow, and supplier expansion.

Meeting those challenges may be harder for Utah entrepreneurs because Utah is a small state (on the basis of population), and the ability to solve certain problems is constrained by the state's size. For example, while it would be ideal to have a financial network as sophisticated as that found in larger metropolitan areas, implementing and sustaining those programs requires a capital commitment and critical mass that is simply not available in Utah at the present time.

Are Utah Bankers Too Conservative?

Some companies have found more sympathetic support for their financial needs by contacting financial institutions outside of Utah. In almost every instance, these financial institutions have had more experience in lending to particular industries, have a broader range of capabilities, and are located in states much larger (more densely populated) than Utah. On balance, there is no clear evidence that bankers in Utah are more conservative than bankers in states with population levels similar to Utah's. Ironically, the best defense of banking policies came from some of the most successful business owners. One in particular felt that it is a banker's responsibility to be conservative. Banks use depositors' money to make loans. Their first and foremost obligation is to those depositors and from that perspective, they should view lending with a conservative eye.

The structure of the banking industry may contribute to the perception that banker's are conservative. Problems are compounded as businesses move away from the corporate levels. Loan officers at the branch level may not be equipped or interested in helping companies with much more than the most simple and safe loans because the incentives to do more are lacking. The branch loan officer does not earn any "brownie points" for making a small, potentially risky loan; but his or her job, or possible advancement with the bank may be jeopardized if that loan goes bad. There appears to be more incentive to find a reason to turn the loan down.

Overall, the sense is that while banks are indeed restricted from engaging in certain types of transactions, and though bankers are risk adverse, more could be done in the commercial lending area, especially in lending to high technology companies.

High Technology Lending

Lending to high technology companies poses real problems for Utah bankers. The recent emergence of successful technology-oriented companies in Utah means that few in the banking profession understand high tech business cycles, and even fewer have the ability to evaluate high tech products. Many banks steer away from lending to high technology companies because the perceived risks far outweigh the potential rewards. Banks do not have the option of incorporating equity kickers in the loan package; there are no high-end returns to compensate them for the risk. Venture investors recognize well this risk and typically require large returns on their investment for their willingness to assume that risk. The risk in a young technology business is absolutely there. It is not imagined. Short product life cycles, and technical obsolescence is very real. As one banker explained:

> *The Bank of Boston formed a substantial high tech lending unit, called the high tech unit, and they split off a group called "Baby Tech"—a small group of experienced lenders who were specifically designated to lend to emerging technology companies. They had some sound people with good technology backgrounds, and they had two basic tenets: (1) We will look for companies that are in an industry and have a product that has potential to grow substantially; (2) We will look for something that has good, sound management expertise. And they would go to very, very young startups, sometimes ones that never had even $1 in sales, and structure a borrowing formula based on future receivables. That was their*

genesis. That unit has now been disbanded because it was fraught with problems. The Bank of Boston now views that effort as their community reinvestment program. A substantial bank tried it and did not do well; the risks are very real.

Too Much Too Soon

From a banking perspective, business owners approach banks too early in their needs for credit. Individuals look to banks to fill their financing requirements before the company is a loanable credit. Many business owners are ill-equipped when they approach the bank. They have an idea and come forward without accountants or attorneys, without a plan, and marginal capital if anything, and expect bankers to put money into the business. That is not the role of a bank. Essentially, a business must prove to the banker's satisfaction that it has the ability to repay the debt. Furthermore, bankers are more comfortable lending to businesses that have a sufficient amount of equity cushion. This protects the bank in the case of a downturn in a particular business or industry. Companies with no track record, no collateral, small levels of owner-equity investment, inadequate management, and no business plan are poor candidates for bank loans.

A lack of planning on the part of the entrepreneur is another common complaint. Many business owners have not carefully thought through their future capital needs. They underestimate the amount of capital that will be necessary to carry out their expansion plans, nor do they understand the relationship between an increase in capital requirements and an increase in business activity. Lending the proper amount of capital to help a business expand may well overextend the company to the point where cash flows are insufficient to repay the loan. This is not in the best interest of either organization.

Individuals who consult with owners of small businesses voiced similar opinions. They felt that small business people lacked sophistication in "packaging" themselves when they approached banks; they do not understand what the banks can and cannot do. As one consultant explained:

> *I think there is a real problem in terms of lack of understanding and education to begin with as to what types of financing resources are available in a particular situation. I talk to people over and over and they say venture capital. And venture capital is one source of financing that is for a particular area. They have no idea as to what type or source of financing is the best type for their situation.*

A small business owner, with little in the way of collateral, might approach a bank when he needs to purchase expensive equipment. A more appropriate source might be a leasing company. Throughout the country, there are leasing companies that will lease high technology equipment at market rates, to early stage businesses. These leases are generally structured in a manner that allows the leasing company to participate in the upside of the small business by taking warrants to purchase stock at a given price, or negotiated price, at some point in the future.

Bankers and consultants in each group indicated that in their experience, Utah has a very high degree of entrepreneurial activity; that there is a pioneering spirit in the state that encourages people to be self-sufficient, which translates to a high degree of new business formation, and failure. This perception is borne out in data provided by Dun & Bradstreet detailing business formations and failures (Table 7). This volatility is a cause of concern for bankers, specifically in the retail and service sectors where failure rates are especially high. Unfortunately, banks are usually the first stop in many entrepreneurs' search for capital; when in reality, banks should be much farther down the line. Friends, family, private investors, leasing companies, and industrial credit organizations are all examples of capital sources that should be approached before a banker can be helpful.

Table 7

Business Starts and Failures, 1987
Utah and Selected States

	Business Starts	Business Failures
Maine	997	60
New Hampshire	1,220	134
Arkansas	1,732	438
Idaho	825	444
New Mexico	1,329	224
Utah	1,849	598
Nevada	1,163	285
Hawaii	997	176

Note: States selected for comparison have population levels similar to Utah's.
Source: Dun & Bradstreet Corporation, *Business Starts Record, 1987.* (New York, New York).

Risk Tolerance Is Low

By their own admission, bankers do not have a large appetite for risk. They exist in a heavily regulated environment and are charged with a fiduciary responsibility to act as custodians for depositors' money. What may not appear as a risky transaction to a small business owner/entrepreneur may easily exceed a bank's risk tolerance level. Additionally, banks have no way to compensate for the high degree of risk that may be associated with lending to small business. Companies in the startup stage and companies that need large equity loans are generally considered by the bank to be high risk investments. As one banker explained:

> *If you have a small company, especially a high tech company, it is going to take a very qualified person to lend to them and to monitor them. What is your return? It is interest. And it is a very low return. Maybe it can be a little higher than you would get on a larger credit, but you don't get any more than that. That is why when the venture capitalist goes in, they want a very large return and they want assurance that the company is going to go somewhere. That is why banks tend to pick companies with a proven track record, because the returns of lending to an unproven company just do not warrant the level of risk involved.*

Profit Motive Is Bank's Prime Motive

Although the market for capital is a global one, banks are not bottomless wells of money and, putting the issue of risk aside, not every viable, low-risk loan will be made. The administrative costs associated with making small loans are as high if not higher, than those associated with large loans. Therefore, making many small, risk-free loans may not be as cost-effective for the bank as making fewer large, risk-free loans would be. The size of the bank (value of loanable assets) determines the size of each transaction. In many cases, the smaller community banks may be more willing to make many small loans (loans under $200,000) simply because they have less money to lend, and want to spread their risk as much as possible. For this reason, smaller banks may also have a greater interest in utilizing the loan guarantee programs offered through the Small Business Administration (7A and 504 programs) to a greater extent than do larger banks. Small business owners need to carefully consider the bank's size when approaching a potential lender.

Loan Guarantee Programs

SBA leveraging and guarantee programs, such as those administered by the Deseret Certified Development Company (DCDC), have been extremely useful in helping small businesses secure capital. Over the years, DCDC has put together over 200 financings for small businesses; of that, 185 have been 504 financings. These loan guarantee programs help the banks reduce their risk to the point that the bank is willing to lend money to a company in a situation that was deemed too risky without the guarantee portion. In 1988, through the 7A and 504 loan programs, SBA guaranteed a total of 273 loans valued at $44.0 million. Approximately $13.1 million was guaranteed under the 504 program. These programs are especially significant for rural Utah companies since they typically have a more difficult time securing capital than do companies located in metropolitan areas of the state.

SBA programs did not always receive high marks from some business owners who felt the lending program was too complicated and time-consuming. Sometimes six to eight weeks passed after the application had been made before the company received approval, and then it was for much less than was needed. Collateral requirements were another drawback. In some instances, collateral in excess of two to three times the actual loan amount was necessary. Several entrepreneurs indicated that SBA required them to pledge every asset of the company and the individual as collateral for the loan, thus prohibiting the company from securing capital for future needs (it should be noted that these companies represent higher risks, and the SBA programs are considered "lender of last resort" programs which may explain the added time and capital requirement). Furthermore, while the 504 program has proved valuable to small businesses, it can be used for fixed assets only. There is no SBA 504 equivalent for equity lending.

Utah does have one equity loan program that is administered through the Utah Technology Finance Corporation—the participating loan program. Under this program, UTFC is a co-lender with a participating bank. UTFC provides 30 percent of the loan, or up to $30,000 with the bank providing the remainder. The bank agrees to treat UTFC's portion as an equity investment, and the remaining 70 percent is treated as a loan. This program was designed to help technology-based companies lacking those assets that would make it a loanable credit. UTFC comes into the loan on a first-in, last-out basis, thus reducing the amount of risk to the bank and making the loan more attractive.

Entrepreneurs who were familiar with UTFC indicated that their interactions with this organization had been both productive and positive. UTFC grants have been useful bargaining chips in attracting money from other investors. According to one entrepreneur, "UTFC money is inexpensive money. A 3 percent royalty on early-stage capital is almost like a gift."

Venture Capital

Utah has a growing venture capital fund, but because the fund is so small, the number and size of investments are limited. The perception from the business community was that while seed money was available for the top-notch deals, many other high technology businesses could be candidates if more money were available. Not surprisingly, the need to attract more venture money into the state was a sentiment expressed frequently by business owners/entrepreneurs. Many felt that more venture money would go far in alleviating Utah's capital problems. In reality, venture capital fills a very, very narrow niche in the financing spectrum. Furthermore, venture capital is not adventure capital. Venture investors are extremely selective in the types of companies in which they invest. They require that the company have specific characteristics—namely, high growth potential, a large market, and few competitors. Venture capitalists are not interested in putting money into a Utah company that may eventually have only $2 million in sales. Venture people will not do it in Utah, nor will they do it in Chicago or New York.

There is some evidence to suggest that the business deal flow in Utah may not be adequate to motivate an outside investor to maintain an office here. Instead, Utah Ventures acts as a feeder fund for larger, out-of-state investors. Utah Ventures provides the due diligence, and a small percentage of the necessary capital with the understanding that a larger investor will come in at a later date if the company meets all of its milestones.

There is yet another facet of the venture industry that does not bode well for emerging technology companies in Utah. The venture capital industry is maturing, causing structural changes in terms of preferred investments. First, capital is just not as available as it has been in the past. It is increasingly difficult for early startup companies to attract venture dollars because investors have many early-stage investments and are more interested in setting aside capital for second-stage and third-stage investments into these companies. Second, when they do invest in early-stage companies, they want a larger equity position, say 40 to 60 percent ownership for a $3 to $5 million investment. In most cases, this is an unacceptable proposition for the business owner who has struggled to build a business. As one entrepreneur explained:

> *I've watched individuals who have founded companies get venture capital and grow successfully. And then I've watched their lives eventually go down the tubes because they lose control. I've watched companies go through this growth curve and then sink after getting venture capital because there is no heart left. These venture capital people come in and make decisions based on a MBA formula. ...I think there are people, like myself, who are unwilling to give away control in order to start up.*

"Angels" or wealthy individuals with "play money" are another source of venture capital. In some states they are an important source of startup, early-stage or mezzanine capital. In Utah, there are relatively few angels, and those who do live here may be more inclined to find other types of investments. Furthermore, the perception in the business community is that those angels who are willing to invest want a controlling interest in the company with a capital infusion that does not warrant such a position.

Does Utah Have a Capital Gap?

There is no clear evidence that Utah has a "capital gap" at any point along the financing continuum. However, at certain points along that continuum, the amount of available capital is thin. Identifying these areas with any degree of precision is difficult, but not impossible. There was a general consensus among participants in the focus groups that the availability of capital may be limited for businesses in the following situations:

A. Companies that intend to remain small, or whose ability to grow is limited by the market they serve, and will not generate a rate of return high enough to be of interest to a venture investor. Not only are venture investors uninterested in these companies; in many cases, the business has no tangible assets, and is excluded from the SBA lending programs. Bank lending may be available in some situations; but even then, bankers prefer that the owners use personal assets to guarantee the loan. Although these companies may not have the potential growth rate of technology companies, they can provide steady jobs for Utah residents.

B. New or young companies with less than $5 million in sales and/or have capital needs of less than $250,000. Large banks generally shy away from making commercial loans of less than this amount since administrative costs can be excessive. Also, these companies typically do not have enough assets to collateralize the loan. Without SBA guarantees, amounts over $200,000 may be pushing the lending limits of smaller banks. This is not a problem specific to companies residing in Utah; it is universal.

C. Companies that require equity investments ranging from $1 million to $5 million, and technology-oriented companies that want out-of-state equity investments in amounts less than $1 million. Equity financing for all but the very largest, or fastest growing companies poses another problem. Utah's venture capital group is too small to invest in more than a handful of companies, and would be hard-pressed to make investments of this size ($1 million to $5 million). Requests of this size are out of UTFC's range. Generally, outside investors will not get directly involved until a company's equity capital needs exceed $1 million. Until then, investors are more comfortable investing in their "own back yard" where they can conveniently interact with business owners on a weekly basis if necessary. Furthermore, banks are precluded from making equity investments, and companies of this size seldom have the track record, or asset base necessary for debt lending.

Should State Government Do Anything?

There was no consensus that the state undertake any specific action, or initiate a new program to help small businesses secure financing. There was general agreement that the state should not be in the venture capital or lending business using taxpayer's money. Likewise, a great deal of skepticism was expressed as to the ability of government to implement or manage any type of a financial program. Some felt a state-funded program chartered with the objective of reducing the risks of lending to small businesses was a sure blueprint to make questionable loans In fact, one reason for the tightening of SBA requirements was the high ratio of bad loans that were made when the program was much more flexible. Bankers indicated that if the state put money into a program, it should be administered by a financial institution, or agency with extensive lending experience.

Providing information was another suggestion that received a high degree of support from business owners and bankers alike. At the present time, there is no single office in the state that provides information on the full range of available financial services. Utah Ventures receives on average, 35 to 40 business plans each month. Most of these companies do not meet this investor's criteria, but are viable small businesses that could grow with the proper financing. However, the partners at Utah Ventures do not know in what direction to steer these small businesses. As one individual explained:

> *It is easy if you buy a residence, or if you buy real estate to find out [what is most appropriate]. You just ask your realtor. The same thing should be true for the moms and pops who want to make the transition from mom and pop to include other owners in the business, albeit it may still be a small business over time. They still need to know what stages of financing they should go to.*

Tax incentives were discussed and often recommended in general terms, but no specific proposal received wide support from focus group participants. The effectiveness of such proposals is often vigorously challenged.

Recommendations/Conclusions

Based on the opinions expressed by participants in the four focus groups conducted by the Bureau of Economic and Business Research, the following recommendations have been set forth.

1. Expand the level of technical support, counseling, and education that is available through the Small Business Development Center and possibly other organizations such as the Deseret Certified Development Company.

By utilizing the existing structure of the SBDC, the state could facilitate an education and consulting program that would identify the most appropriate source of financing depending upon the needs of a particular business. This information could be detailed in a state-sponsored publication and distributed by SBDC counselors.

Deseret Certified Development Company provides (DCDC) specialized assistance to businesses and local loan fund managers in rural Utah in the use of public sector development finance programs. Some level of state support could be maintained since such support renders DCDC more competitive in attracting additional federal business financing resources to Utah, such as the rural loan program of the U. S. Farmers Home Administration.

2. Expand the role of the Utah Technology Finance Corporation. Enhance UTFC's ability to coordinate and cooperate with revolving loan programs operated through city and county governments. One suggestion is to expand UTFC's award program to include a second round, or Phase II funding in amounts greater than $50,000. A second suggestion is to expand the participating loan program by making more money available for subordinated, equity lending.

3. Again, no clear support was evidenced for the creation of a new state-funded agency that would act as the "lender or investor of last resort" for either emerging or existing businesses. Furthermore, the creation of such an agency could undermine the effectiveness of existing organizations such as UTFC, Utah Ventures, and DCDC. A better strategy would include one where the state acted as a facilitator in the creation of a privately-funded and administered program that would act as a long-term equity investor for Utah's small businesses.

4. Significant progress has been achieved by bankers, venture capitalists, and the state's economic development efforts. It is clear that continuing progress can be both expected and encouraged in the future.

Utah Business Statistics

UTAH DATA	Jul. 1988	Jul. 1989 *	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	20,752	NA	NA	NA	19,988	NA
New Corporations (no.)	413	416	0.7%	452	469	-3.8%
New Car, Truck, and Motor Home Sales (no.)	5,563	5,513	-0.9%	5,096	5,263	-3.2%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	64.70	72.50	12.1%	71.02	66.10	7.4%
Lambs (cwt)	55.40	63.00	13.7%	61.63	68.11	-9.5%
Milk Wholesale (cwt)	10.80	11.60	7.4%	11.97	11.59	3.2%
Alfalfa Hay, Baled (per ton)	75.00	87.00	16.0%	81.42	72.33	12.6%
Cattle Slaughtered (live weight) (thous. of lbs.)	45,846	46,874	2.2%	47,451	45,201	5.0%
Construction						
Total Construction (thous. of dol.) 1	64,123.8	74,631.3	16.4%	68,545.5	NA	NA
Residential	37,811.1	44,545.6	17.8%	33,972.6	NA	NA
Nonresidential	12,599.6	15,850.0	25.8%	21,833.5	NA	NA
Additions, Alterations, and Conversions	13,713.1	14,235.7	3.8%	12,739.3	NA	NA
Total Permit Construction (thous. of dol.) 2	68,515.0	84,658.4	23.6%	75,272.2	76,891.9	-2.1%
Residential	37,251.0	44,826.9	20.3%	35,248.7	34,716.4	1.5%
Nonresidential	13,962.6	24,108.6	72.7%	26,258.9	28,076.6	-6.5%
Additions, Alterations, and Repairs	17,301.4	15,722.9	-9.1%	13,764.6	14,098.9	-2.4%
New Dwelling Units (no.)	528	553	4.7%	458	486	-5.9%
Employment						
Civilian Labor Force (thous.)	761.0	790.7	3.9%	769.3	752.0	2.3%
Total Employed Persons	723.5	758.2	4.8%	735.2	711.4	3.3%
Unemployed Persons	37.6	32.5	-13.6%	34.2	40.7	-16.0%
Percent Total Labor Force	4.9	4.1	-16.3%	4.4	5.4	-18.0%
Employees on Nonagricultural Payrolls (thous. of jobs)	654.1	682.2	4.3%	674.1	649.7	3.8%
Manufacturing	99.7	103.0	3.3%	100.8	96.2	4.8%
Mining	8.2	7.9	-3.7%	7.9	8.3	-5.0%
Contract Construction	26.9	27.7	3.0%	25.0	25.1	-0.4%
Transportation, Communication, and Utilities	40.0	40.7	1.8%	40.1	38.6	3.8%
Wholesale Trade	35.8	38.0	6.1%	36.2	35.0	3.6%
Retail Trade	120.8	127.6	5.6%	123.8	118.9	4.1%
Finance, Insurance, and Real Estate	33.4	33.4	0.0%	33.2	33.5	-1.0%
Services 3	155.9	167.2	7.2%	162.8	152.1	7.0%
Federal Government	39.4	40.1	1.8%	39.7	39.4	0.9%
State Government 4	36.4	38.2	4.9%	39.1	38.2	2.3%
Local Government 4	57.6	58.4	1.4%	65.5	64.4	1.8%
Average Weekly Hours						
Manufacturing	40.5	39.5	-2.5%	40.1	40.1	-0.1%
Mining	41.4	40.9	-1.2%	40.6	42.5	-4.6%
Wholesale Trade	38.4	37.2	-3.1%	36.2	38.2	-5.1%
Retail Trade	28.8	27.9	-3.1%	27.5	28.1	-2.3%
Amount of Unemployment Compensation (thous. of dol.)	4,011.2	3,745.0	-6.6%	5,272.8	6,265.5	-15.8%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,434.0	2,189.2	-10.1%	2,288.6	2,368.4	-3.4%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	48,104.6	219,161.2	355.6%	162,061.3	148,412.4	9.2%
Sales and Use Tax	8,609.3	100,450.6	1066.8%	63,241.8	50,728.6	24.7%
Motor Fuel Tax	879.5	12,027.7	1267.6%	11,789.3	10,652.6	10.7%
Individual Income Tax	17,810.8	59,300.3	232.9%	54,113.9	52,724.9	2.6%
Corporation Franchise Tax	2,703.0	5,898.3	118.2%	7,597.7	5,691.6	33.5%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,540.6	NA	NA	NA	3,965.8	NA
Crude Oil (thous. of bbls.)	2,764.5	2,420.3	-12.5%	2,476.6	2,873.1	-13.8%
Natural Gas (mil. of cu. ft.)	21,623.3	23,794.9	10.0%	22,684.6	23,170.0	-2.1%
Coal (thous. short tons)	1,384.0	1,334.0	-3.6%	1,462.6	1,533.0	-4.6%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	994,221	1,143,496	15.0%	931,064	916,029	1.6%
Highway Traffic Count Across State Lines	NA	41,318	NA	NA	NA	NA
Transient Room Taxes (thous. of dol.)	74.9	775.2	935.0%	633.6	491.6	28.9%
Visits, State, Nat'l. Parks, Monuments (thous.)	2,338.8	2,267.4	-3.1%	1,101.4	1,075.3	2.4%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	486,273	498,401	2.5%	494,963	484,900	2.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	181,044	186,762	3.2%	184,307	178,767	3.1%
Electric Customers (Residential)	471,233	481,930	2.3%	481,175	475,864	1.1%
Electric Customers (Commercial)	46,911	47,743	1.8%	47,527	46,473	2.3%
Natural Gas Customers (Residential & Commercial)	456,191	470,838	3.2%	466,681	453,897	2.8%
Natural Gas Customers (Industrial)	546	567	3.8%	560	547	2.3%

Utah Business Statistics

UTAH DATA	Jul. 1988	Jul. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.0r	55.8f	3.3%	53.6	52.1	2.9%
Unemployment Rate	4.7r	3.8	-19.1%	3.9	4.9	-20.7%
Auth. Permit Construction (thous. of dol.)	9,429.5	10,112.1	7.2%	9,262.3	10,057.9	-7.9%
New Dwelling Units (no.)	62	87	40.3%	66	73	-10.6%
Postal Receipts (thous. of dol.)	391.2	639.7	63.5%	536.9	379.8	41.4%
Electric Customers (Residential)	48,041	49,039	2.1%	48,582	47,848	1.5%
Electric Customers (Commercial)	3,659	3,610	-1.3%	3,568	3,375	5.7%
Natural Gas Customers (Residential)	50,247	51,808	3.1%	51,261	49,722	3.1%
Natural Gas Customers (Industrial)	53	56	5.7%	55	52	4.8%
Telephone Lines in Service (Mt. Bell)(Residential)	55,363	57,016	3.0%	56,231	54,995	2.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,399	12,069	5.9%	11,719	10,990	6.6%
Salt Lake County						
Non-Ag. Employment (thous.)	337.4r	351.4f	4.1%	347.4	336.4	3.2%
Unemployment Rate	4.6r	3.9	-15.2%	4.0	5.1	-21.2%
Auth. Permit Construction (thous. of dol.)	25,253.0	33,440.0	32.4%	31,995.5	34,386.4	-7.0%
New Dwelling Units (no.)	180	167	-7.2%	170	177	-3.7%
Postal Receipts (thous. of dol.)	7,718.7	7,372.8	-4.5%	8,273.3	7,745.4	6.8%
Electric Customers (Residential)	238,592	241,864	1.4%	241,819	238,362	1.5%
Electric Customers (Commercial)	20,317	20,671	1.7%	20,701	20,224	2.4%
Natural Gas Customers (Residential)	219,329	223,645	2.0%	222,932	219,119	1.7%
Natural Gas Customers (Industrial)	236	244	3.4%	240	235	2.4%
Telephone Lines in Service (Mt. Bell)(Residential)	229,635	234,534	2.1%	232,849	228,847	1.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,235	113,237	1.8%	112,079	110,473	1.5%
Utah County						
Non-Ag. Employment (thous.)	79.4r	83.2f	4.8%	82.2	78.1	5.2%
Unemployment Rate	4.6r	4.5	-2.2%	3.8	5.3	-28.1%
Auth. Permit Construction (thous. of dol.)	10,537.5	12,905.9	22.5%	12,100.8	10,784.2	12.2%
New Dwelling Units (no.)	67	82	22.4%	71	66	7.6%
Postal Receipts (thous. of dol.)	1,228.4	1,298.1	5.7%	1,332.7	1,045.9	27.4%
Electric Customers (Residential)	51,912	52,967	2.0%	52,934	52,987	-0.1%
Electric Customers (Commercial)	6,009	6,072	1.0%	5,995	6,003	-0.1%
Natural Gas Customers (Residential)	61,183	62,638	2.4%	62,551	61,147	2.3%
Natural Gas Customers (Industrial)	65	73	12.3%	72	68	5.9%
Telephone Lines in Service (Mt. Bell)(Residential)	63,612	65,455	2.9%	65,727	63,845	2.9%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	19,836	21,278	7.3%	21,049	19,526	7.8%
Weber County						
Non-Ag. Employment (thous.)	62.4r	64.4f	3.2%	63.0	61.0	3.3%
Unemployment Rate	6.1r	5.3	-13.1%	5.0	6.5	-23.0%
Auth. Permit Construction (thous. of dol.)	4,715.5	4,744.7	0.6%	5,149.7	7,157.3	-28.0%
New Dwelling Units (no.)	41	48	17.1%	44	52	-15.6%
Postal Receipts (thous. of dol.)	618.9	549.7	-11.2%	679.0	636.8	6.6%
Electric Customers (Residential)	53,404	53,949	1.0%	53,951	53,275	1.3%
Electric Customers (Commercial)	4,912	4,948	0.7%	4,981	4,904	1.6%
Natural Gas Customers (Residential)	49,553	50,285	1.5%	50,279	49,418	1.7%
Natural Gas Customers (Industrial)	82	85	3.7%	84	84	0.4%
Telephone Lines in Service (Mt. Bell)(Residential)	46,538	47,424	1.9%	47,014	46,207	1.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,007	12,212	1.7%	12,149	11,519	5.5%

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:	
Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

Utah Business Statistics

UTAH DATA	Aug. 1988	Aug. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.5r	56.1f	2.9%	53.9	52.3	3.1%
Unemployment Rate	5.2r	4.2	−19.2%	3.9	4.9	−20.7%
Auth. Permit Construction (thous. of dol.)	13,008.0	10,120.0	−22.2%	9,021.7	9,892.3	−8.8%
New Dwelling Units (no.)	83	78	−6.0%	65	71	−8.0%
Postal Receipts (thous. of dol.)	408.4	574.1	40.6%	550.7	388.7	41.7%
Electric Customers (Residential)	48,230	49,133	1.9%	48,658	47,937	1.5%
Electric Customers (Commercial)	3,491	3,611	3.4%	3,578	3,396	5.3%
Natural Gas Customers (Residential)	50,076	51,652	3.1%	51,392	49,855	3.1%
Natural Gas Customers (Industrial)	53	56	5.7%	55	52	5.1%
Telephone Lines in Service (Mt. Bell)(Residential)	55,489	57,128	3.0%	56,368	55,004	2.5%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,454	12,072	5.4%	11,770	11,052	6.5%
Salt Lake County						
Non-Ag. Employment (thous.)	339.8r	356.1f	4.8%	348.8	337.0	3.5%
Unemployment Rate	4.9r	3.7	−24.5%	4.0	5.1	−21.4%
Auth. Permit Construction (thous. of dol.)	36,834.2	37,186.7	1.0%	32,024.9	34,111.8	−6.1%
New Dwelling Units (no.)	200	176	−12.0%	168	176	−4.5%
Postal Receipts (thous. of dol.)	8,136.4	7,908.1	−2.8%	8,254.3	7,885.9	4.7%
Electric Customers (Residential)	238,619	242,704	1.7%	242,159	238,642	1.5%
Electric Customers (Commercial)	20,507	21,165	3.2%	20,756	20,282	2.3%
Natural Gas Customers (Residential)	218,491	223,028	2.1%	223,310	219,473	1.7%
Natural Gas Customers (Industrial)	241	245	1.7%	241	235	2.3%
Telephone Lines in Service (Mt. Bell)(Residential)	229,880	234,988	2.2%	233,274	229,126	1.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,551	113,383	1.6%	112,232	110,569	1.5%
Utah County						
Non-Ag. Employment (thous.)	81.5r	85.4f	4.8%	83.0	78.8	5.2%
Unemployment Rate	4.5r	3.9	−13.3%	3.8	5.1	−25.5%
Auth. Permit Construction (thous. of dol.)	11,053.7	12,789.5	15.7%	12,245.5	10,592.9	15.6%
New Dwelling Units (no.)	82	95	15.9%	72	66	8.9%
Postal Receipts (thous. of dol.)	1,228.7	1,328.8	8.1%	1,341.0	1,078.4	24.4%
Electric Customers (Residential)	53,398	53,398	0.0%	52,934	52,623	0.6%
Electric Customers (Commercial)	6,019	6,346	5.4%	6,023	5,974	0.8%
Natural Gas Customers (Residential)	61,404	62,934	2.5%	62,679	61,280	2.3%
Natural Gas Customers (Industrial)	68	73	7.4%	72	68	6.5%
Telephone Lines in Service (Mt. Bell)(Residential)	63,623	65,131	2.4%	65,853	64,059	2.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	19,927	21,099	5.9%	21,146	19,637	7.7%
Weber County						
Non-Ag. Employment (thous.)	62.4r	64.3f	3.0%	63.3	61.2	3.4%
Unemployment Rate	6.7r	4.5	−32.8%	4.9	6.4	−23.7%
Auth. Permit Construction (thous. of dol.)	6,182.5	6,739.2	9.0%	5,196.1	6,364.9	−18.4%
New Dwelling Units (no.)	62	57	−8.1%	44	49	−11.6%
Postal Receipts (thous. of dol.)	607.6	639.4	5.2%	681.7	639.7	6.6%
Electric Customers (Residential)	53,428	53,998	1.1%	53,999	53,333	1.2%
Electric Customers (Commercial)	4,972	5,030	1.2%	4,986	4,913	1.5%
Natural Gas Customers (Residential)	49,784	50,264	1.0%	50,319	49,534	1.6%
Natural Gas Customers (Industrial)	82	85	3.7%	84	84	1.0%
Telephone Lines in Service (Mt. Bell)(Residential)	46,560	47,331	1.7%	47,078	46,255	1.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,034	12,255	1.8%	12,167	11,596	4.9%

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Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	20,752	NA	NA	NA	20,099	NA
New Corporations (no.)	456	420	-7.9%	449	471	-4.8%
New Car, Truck, and Motor Home Sales (no.)	5,439	5,964	9.7%	5,140	5,246	-2.0%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	67.00	71.90	7.3%	71.43	66.34	7.7%
Lambs (cwt)	54.30	62.80	15.7%	62.33	66.61	-6.4%
Milk Wholesale (cwt)	11.20	12.30	9.8%	12.06	11.55	4.4%
Alfalfa Hay, Baled (per ton)	76.00	86.00	13.2%	82.25	73.17	12.4%
Cattle Slaughtered (live weight) (thous. of lbs.)	50,863	49,677	-2.3%	47,352	45,748	3.5%
Construction						
Total Construction (thous. of dol.) 1	75,020.7	83,879.3	11.8%	69,283.7	NA	NA
Residential	39,158.2	47,809.9	22.1%	34,693.6	NA	NA
Nonresidential	20,490.3	20,418.6	-0.3%	21,827.6	NA	NA
Additions, Alterations, and Conversions	15,372.2	15,650.9	1.8%	12,762.5	NA	NA
Total Permit Construction (thous. of dol.) 2	84,059.7	84,777.9	0.9%	75,332.1	75,535.6	-0.3%
Residential	39,597.1	45,251.8	14.3%	35,719.9	34,217.6	4.4%
Nonresidential	25,244.5	23,362.1	-7.5%	26,102.1	27,771.4	-6.0%
Additions, Alterations, and Repairs	19,218.1	16,164.0	-15.9%	13,510.1	13,546.5	-0.3%
New Dwelling Units (no.)	533	513	-3.8%	456	476	-4.2%
Employment						
Civilian Labor Force (thous.)	770.3	793.2	3.0%	773.2	753.3	2.6%
Total Employed Persons	731.0	761.8	4.2%	739.1	713.1	3.6%
Unemployed Persons	39.2	31.4	-19.9%	34.1	40.2	-15.2%
Percent Total Labor Force	5.1	4.0	-21.6%	4.4	5.3	-17.5%
Employees on Nonagricultural Payrolls (thous. of jobs)	660.6	690.0	4.5%	677.0	651.6	3.9%
Manufacturing	100.6	104.1	3.5%	101.3	96.8	4.6%
Mining	8.0	8.5	6.3%	7.9	8.3	-5.0%
Contract Construction	27.5	28.7	4.4%	25.2	25.0	0.8%
Transportation, Communication, and Utilities	40.4	41.1	1.7%	40.2	38.8	3.7%
Wholesale Trade	36.0	38.5	6.9%	36.5	35.1	4.2%
Retail Trade	123.0	129.9	5.6%	124.5	119.3	4.4%
Finance, Insurance, and Real Estate	33.5	33.2	-0.9%	33.1	33.5	-0.9%
Services 3	157.8	168.3	6.7%	163.6	152.8	7.1%
Federal Government	39.3	40.3	2.5%	39.8	39.4	1.1%
State Government 4	36.5	38.4	5.2%	39.3	38.3	2.5%
Local Government 4	58.0	59.0	1.7%	65.6	64.5	1.7%
Average Weekly Hours						
Manufacturing	40.7	40.3	-1.0%	40.0	40.2	-0.4%
Mining	40.8	41.8	2.5%	40.6	42.6	-4.7%
Wholesale Trade	36.9	35.5	-3.8%	36.1	38.2	-5.3%
Retail Trade	28.1	28.0	-0.4%	27.4	28.1	-2.4%
Amount of Unemployment Compensation (thous. of dol.)	5,018.5	4,401.6	-12.3%	5,221.4	6,212.6	-16.0%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,401.0	2,172.4	-9.5%	2,269.5	2,364.1	-4.0%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	203,069.6	80,700.2	-60.3%	151,863.8	148,589.6	2.2%
Sales and Use Tax	87,776.3	3,085.9	-96.5%	56,184.3	52,052.1	7.9%
Motor Fuel Tax	11,894.4	12,333.7	3.7%	11,825.9	10,889.1	8.6%
Individual Income Tax	63,477.3	45,612.6	-28.1%	52,625.2	51,160.6	2.9%
Corporation Franchise Tax	878.2	195.2	-77.8%	7,540.8	5,639.5	33.7%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,722.2	NA	NA	NA	4,036.4	NA
Crude Oil (thous. of bbls.)	2,762.8	2,417.1	-12.5%	2,447.8	2,861.5	-14.5%
Natural Gas (mil. of cu. ft.)	22,428.3	23,713.5	5.7%	22,791.7	23,377.9	-2.5%
Coal (thous. short tons)	1,694.0	1,774.0	4.7%	1,469.3	1,549.1	-5.2%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	1,060,054	1,218,317	14.9%	944,252	919,557	2.7%
Highway Traffic Count Across State Lines	NA	41,318	NA	NA	NA	NA
Transient Room Taxes (thous. of dol.)	1,099.2	85.1	-92.3%	549.1	561.3	-2.2%
Visits, State, Nat'l. Parks, Monuments (thous.)	2,275.4	2,318.0	1.9%	1,104.9	1,088.7	1.5%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	486,884	498,802	2.4%	495,956	485,626	2.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	181,606	186,970	3.0%	184,754	179,189	3.1%
Electric Customers (Residential)	476,380	483,513	1.5%	481,770	475,838	1.2%
Electric Customers (Commercial)	47,115	48,743	3.5%	47,663	46,559	2.4%
Natural Gas Customers (Residential & Commercial)	454,906	470,565	3.4%	467,986	454,986	2.9%
Natural Gas Customers (Industrial)	552	567	2.7%	561	548	2.5%

NATIONAL DATA	Jul. 1988	Jul. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	4,926.9	5,273.2	7.0%	5,093.6	4,732.7	7.6%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,079.8	4,443.8	8.9%	4,280.5	3,945.6	8.5%
Industrial Production Indexes (seasonally adjusted) (1977=100)	138.0	142.0	2.9%	140.5	134.3	4.6%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	435.6	481.2	10.5%	455.8	413.0	10.4%
Net Exports of Goods and Services (bil.) (qtly.)	–66.2	–67.7	2.3%	–60.5	–92.8	-34.8%
Exports of Goods and Services (bil.) (qtly.)	556.8	618.6	11.1%	597.2	506.9	17.8%
Imports of Goods and Services (bil.) (qtly.)	623.0	686.3	10.2%	657.7	599.7	9.7%
Index of Leading Indicators (1982=100)	143.0	144.0	0.7%	144.6	141.8	2.0%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	118.5	124.4	5.0%	121.7	116.2	4.7%
CPI-U (All Urban Consumers) Food & Beverages	118.8	125.4	5.6%	122.3	115.8	5.7%
CPI-U (All Urban Consumers) Housing	119.1	123.9	4.0%	121.0	116.7	3.7%
CPI-U (All Urban Consumers) Transportation	109.8	115.4	5.1%	112.3	107.5	4.5%
CPI-U (All Urban Consumers) Medical Care	139.3	149.7	7.5%	144.4	134.9	7.0%
CPI-U (All Urban Consumers) Energy	91.4	98.5	7.8%	92.5	89.4	3.4%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	108.5	114.0	5.1%	111.4	106.6	4.5%
GNP Price Deflator (1982=100) (qtly.)	121.9	126.8	4.0%	124.3	119.4	4.1%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	121.7	124.0	1.9%	123.0	120.9	1.8%
Total Civilian Employment (mil.)	115.0	117.5	2.2%	116.5	114.0	2.2%
Unemployment Rate	5.4	5.2	-3.7%	5.3	5.7	–7.4%
Construction						
Total Construction (mil. of dol.)	22,309.4	22,329.5	0.1%	20,475.0	21,485.6	–4.7%
Residential	10,098.6	10,318.2	2.2%	9,885.3	9,951.9	–0.7%
Nonresidential	8,215.7	7,975.6	–2.9%	7,011.6	7,612.4	-7.9%
Non-Building	3,995.1	4,035.7	1.0%	3,578.1	3,943.8	-9.3%
New Dwelling Units (no.)	120,140	119,900	–0.2%	114,746	123,525	-7.1%
Interest Rates						
Federal Funds Rate	7.75	9.24	19.2%	9.03	6.99	29.1%
Short Term (3-month Treasury bill rate)	6.73	7.92	17.7%	8.02	6.09	31.7%
Long Term (30-year Treasury bond yields)	9.20	8.19	–11.0%	8.98	9.04	–0.7%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	9.29	10.98	18.2%	10.70	8.75	22.3%
Mortgage Rates (new homes)	8.80	10.06	14.3%	9.38	8.83	6.3%

Sources: ***Business Conditions Digest***, U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Business Expenditures for New Plant Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Survey of Current Business, U.S. Department of Commerce: New Home Mortgage Rates.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

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NATIONAL DATA	Aug. 1988	Aug. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	4,926.9	5,273.2	7.0%	5,122.5	4,762.7	7.6%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,094.2	4,456.4	8.8%	4,310.7	3,970.2	8.6%
Industrial Production Indexes (seasonally adjusted) (1977=100)	138.5	142.4	2.8%	140.8	134.9	4.4%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	435.6	481.2	10.5%	459.6	416.6	10.3%
Net Exports of Goods and Services (bil.) (qtly.)	−66.2	−67.7	2.3%	−60.7	−88.7	−31.6%
Exports of Goods and Services (bil.) (qtly.)	556.8	618.6	11.1%	602.4	515.1	16.9%
Imports of Goods and Services (bil.) (qtly.)	623.0	686.3	10.2%	663.0	603.9	9.8%
Index of Leading Indicators (1982=100)	144.1	144.7	0.4%	144.7	141.8	2.0%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	119.0	124.6	4.7%	122.2	116.6	4.7%
CPI-U (All Urban Consumers) Food & Beverages	119.4	125.6	5.2%	122.8	116.2	5.7%
CPI-U (All Urban Consumers) Housing	119.5	124.2	3.9%	121.4	117.0	3.8%
CPI-U (All Urban Consumers) Transportation	109.6	114.3	4.3%	112.7	107.7	4.6%
CPI-U (All Urban Consumers) Medical Care	139.9	150.7	7.7%	145.3	135.7	7.1%
CPI-U (All Urban Consumers) Energy	92.3	97.0	5.1%	92.9	89.3	4.0%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	108.8	113.3	4.1%	111.8	106.8	4.6%
GNP Price Deflator (1982=100) (qtly.)	121.9	126.8	4.0%	124.7	119.7	4.2%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	122.0	124.0	1.6%	123.2	121.0	1.8%
Total Civilian Employment (mil.)	115.2	117.6	2.1%	116.7	114.2	2.2%
Unemployment Rate	5.6	5.2	−7.1%	5.3	5.7	−7.5%
Construction						
Total Construction (mil. of dol.)	24,826.5	24,128.5	−2.8%	20,557.2	21,568.1	−4.7%
Residential	11,788.2	11,553.8	−2.0%	9,921.5	10,027.6	−1.1%
Nonresidential	9,259.1	8,625.7	−6.8%	7,031.2	7,679.4	−8.4%
Non-Building	3,779.2	3,949.0	4.5%	3,604.6	3,883.5	−7.2%
New Dwelling Units (no.)	140,836	129,170	−8.3%	114,499	123,335	−7.2%
Interest Rates						
Federal Funds Rate	8.01	8.99	12.2%	9.11	7.10	28.3%
Short Term (3-month Treasury bill rate)	7.02	7.91	12.7%	8.09	6.17	31.1%
Long Term (30-year Treasury bond yields)	9.33	8.26	−11.5%	8.89	9.07	−2.0%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	9.84	10.50	6.7%	10.75	8.88	21.1%
Mortgage Rates (new homes)	8.68	9.83	13.2%	9.48	8.80	7.7%

Sources: *Business Conditions Digest*, U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Business Expenditures for New Plant Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

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The Value of the Census to Utah

Federal and State Funds Distributed in Utah Based on Population

Introduction

Although most people who work with population data have an appreciation for the decennial census, as the 1990 Census approaches, the need for a better understanding of the value of the census has become more evident. The federal census is taken only once every ten years and an accurate census is of major importance to Utah and the nation.

The census count is essential to representative government. The number of seats Utah fills in the U.S. House of Representatives is based on the census count. After the 1980 Census, for instance, Utah gained a third congressional seat. Redistricting of state legislatures and of local government election districts is also based on the decennial census.

The census also provides statistics to help business leaders and government officials to make wise decisions. Census data set the stage for an entire decade of public and private sector planning.

While the benefits of accurate political representation and informed decision making are obvious, census data are also crucial for the distribution of federal and state funds. Indeed, the census count means money to Utah, as well as the counties and cities in the state.

The purpose of this report is to identify the federal programs that distribute money based on population statistics and to quantify the amount of money that is brought into Utah from these programs. As a result, an estimate can be made of the dollar value of the census in distributing federal funds to Utah.

This report will also identify money that is distributed by the state of Utah based on population data. Although these monies are not new money to the state, they can represent an important part of the government revenues flowing into counties and cities all around the state.

***This report was prepared by Natalie Goodnour, Research Analyst, Demographic and Economic Analysis Section, Utah Office of Planning and Budget.**

Of course, it is not possible to determine the exact dollar value of the decennial census to Utah. The value of the census is far-reaching and is not easily assigned a market value, nor is that necessary. Nor is it realistic to identify all monies that flow into and around Utah based on population data. Instead, this paper identifies the major federal and state programs that distribute money in Utah based on population statistics. By identifying the dollar value of federal grants coming into Utah based on population statistics and by showing the importance of census counts for the distribution of state funds, Utahns will be one step closer to understanding that filling out their census forms on April 1, 1990 means more money for their state and community.

Federal Funds Distributed to Utah Based on Population

Brief Overview of Federal Funds

The economy of the states depends significantly on federal monies flowing into the states (Table 1). Utah received $5.8 billion from the federal government, or $3,392 for every person during fiscal year 1988.[1] These monies amount to 28 percent of Utah's total personal income and only six states receive more federal dollars per $1,000 of personal income.[2]

The federal money that flows into Utah is made up of five major categories:

1) grants to state and local governments,
2) salaries and wages for federal employees,
3) direct payments to individuals,
4) procurement contracts, and
5) other programs.

Direct payments for individuals, which consists of social security, medicare, food stamps, veterans' pensions and many other payment forms, is the largest category of federal expenditure in Utah. Procurement contracts, the majority of which are defense and aerospace contracts, is the second largest category. Salaries and wages represents the third largest category, followed by grants to state and local governments and other programs. While all of these categories of federal expenditures are important to Utah, the majority of money that flows into Utah based on population statistics is part of the grants to state and local government category of federal spending.

Grants to State and Local Governments

Grants are allocations of revenue paid by the federal government to state and local governments. For the most part, grants do not include loans or insurance programs, payments in lieu of taxes, payments for contracted services to state and local governments or direct payments to individuals. Grants can be divided into discretionary grants and formula grants. Discretionary grants are not dependent on formulas to determine where money is allocated. Instead, program administrators can distribute funds based on the relative merit of competing applications.

Formula grants, on the other hand, are allocated using formulas mandated by statutes or administrative regulations. In other words, an equation is used to help distribute money fairly and to satisfy the intent of a program. Federal funds that come into Utah based on population statistics are based on the population component of formula grants.

In some grant programs, population data are used to determine a person's eligibility to participate in a program. For the purposes of this report, however, only grants that use population to allocate funds are included as population-dependent programs.

Description of Programs Which Allocate Funds Based on Population

During fiscal year 1988, 44 programs were identified that use population all or in part as a variable to distribute federal money.[3] In total, population-driven federal programs in Utah amounted to $436 million during fiscal year 1988. Of that amount $222 million was distributed to Utah based on the population component of the grant formula. Thus, population statistics from the 1980 Census and population estimates since the census brought in $131 for every person in Utah or $422 per household during fiscal year 1988. Since the census is only taken once every ten years, over a ten-year period the importance of the census just from the distribution of federal funds perspective is clear.

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[1] Fiscal years shown in this section are federal fiscal years (October 1 through September 30).

[2] U.S. Bureau of the Census, *Federal Expenditures by State for Fiscal Year 1988* and U.S. Bureau of Economic Analysis, *Survey of Current Business*, August 1989.

[3] Population dependent grants were based on those programs identified in a report titled, *The Effect of Population Statistics on Federal Funds Distribution* (see bibliography), and the *Catalog of Federal Domestic Assistance 1989*. Any grant that used population in a formula to allocate revenues was determined to be a population-dependent program.

Table 1
Distribution of Federal Funds by State and Territories
Fiscal Year 1988
(millions of dollars)

				Expenditure by Category (percent of total)				
	Rank (per capita)	Per Capita	Total Funds	Grants	Salaries and Wages	Direct Payments	Procurement	Other
Alabama	20	$3,478	$14,354	12.0	18.6	50.0	16.9	2.5
Alaska	3	5,193	2,664	22.3	38.7	16.9	21.1	1.1
Arizona	19	3,534	12,248	9.6	14.4	49.1	24.8	2.1
Arkansas	37	3,090	7,485	13.5	11.0	58.9	11.2	5.5
California	16	3,634	102,366	11.4	16.0	41.0	28.8	2.8
Colorado	11	3,943	12,973	9.6	19.4	36.1	29.5	5.4
Connecticut	8	4,249	13,770	11.2	8.3	37.9	38.1	4.5
Delaware	33	3,163	2,088	15.3	16.1	51.1	15.2	2.3
Florida	21	3,474	42,997	8.0	13.2	62.3	15.3	1.2
Georgia	42	2,882	18,451	16.1	22.6	48.1	10.5	2.7
Hawaii	5	4,535	4,957	9.6	41.9	34.6	11.9	1.9
Idaho	24	3,410	3,407	14.0	12.9	43.9	19.6	9.6
Illinois	46	2,769	31,962	14.6	13.4	56.9	8.2	7.0
Indiana	49	2,656	14,807	13.2	10.8	58.0	11.4	6.6
Iowa	23	3,422	9,697	12.4	6.9	49.8	7.2	23.8
Kansas	17	3,617	8,995	9.8	17.3	47.3	12.4	13.3
Kentucky	43	2,872	10,686	16.5	17.4	57.5	5.9	2.7
Louisiana	44	2,869	12,682	16.8	12.5	51.1	16.1	3.5
Maine	27	3,338	4,025	16.5	12.3	52.5	17.1	1.5
Maryland	4	5,113	23,745	8.4	22.8	34.8	26.6	7.4
Massachusetts	7	4,272	25,079	13.3	9.5	41.7	31.3	4.2
Michigan	50	2,543	23,651	17.9	9.2	62.7	6.8	3.4
Minnesota	31	3,214	13,840	15.3	8.4	44.6	16.7	15.1
Mississippi	12	3,767	9,895	13.4	12.2	45.1	26.1	3.1
Missouri	9	4,195	21,559	9.0	12.2	41.8	30.4	6.6
Montana	15	3,643	2,929	18.6	15.2	46.7	5.1	14.4
Nebraska	14	3,707	5,935	12.0	14.0	45.1	6.6	22.2
Nevada	30	3,235	3,429	9.8	15.1	48.4	25.7	1.1
New Hampshire	41	2,916	3,198	12.4	19.1	50.1	16.1	2.2
New Jersey	36	3,107	23,984	13.9	13.1	54.9	16.6	1.5
New Mexico	2	5,752	8,685	9.6	13.8	27.3	47.5	1.8
New York	26	3,390	60,677	20.6	9.8	51.3	15.2	3.1
North Carolina	47	2,719	17,743	13.0	20.8	53.6	9.5	3.2
North Dakota	6	4,345	2,881	16.0	16.1	37.2	5.8	24.9
Ohio	38	3,083	33,521	14.0	10.4	53.6	19.2	2.8
Oklahoma	28	3,298	10,762	13.1	20.7	52.4	8.1	5.7
Oregon	39	3,005	8,237	16.0	12.2	59.2	9.1	3.5
Pennsylvania	29	3,290	39,569	14.6	12.0	59.3	11.4	2.6
Rhode Island	18	3,585	3,567	18.1	14.1	51.8	13.7	2.4
South Carolina	34	3,130	10,934	12.4	21.2	47.0	17.7	1.7
South Dakota	13	3,764	2,691	16.5	15.9	44.4	4.8	18.5
Tennessee	32	3,193	15,705	14.2	15.0	50.0	18.6	2.2
Texas	40	2,949	49,485	10.4	17.4	46.7	21.3	4.1
Utah	**25**	**3,400**	**5,750**	**12.6**	**22.0**	**35.9**	**26.9**	**2.6**
Vermont	45	2,788	1,550	20.9	11.7	54.4	9.9	3.1
Virginia	1	5,954	35,698	5.5	27.6	29.7	34.4	2.8
Washington	10	3,963	18,306	11.9	18.7	41.9	23.0	4.6
West Virginia	35	3,111	5,861	18.0	9.0	65.5	6.3	1.1
Wisconsin	48	2,702	13,127	17.0	8.0	59.4	9.1	6.6
Wyoming	22	3,453	1,626	27.6	17.3	39.4	12.2	3.6
Dist. of Columbia	--	24,608	15,257	10.6	53.9	11.1	18.1	6.3
U.S. Territories	--	na	7,278	37.3	12.5	42.2	7.0	0.9
Undistributed	--	na	27,361	7.5	0.1	6.4	85.9	0.0
Total	--	$3,545	$884,131	13.0	15.2	46.3	21.3	4.2

Source: U.S. Bureau of the Census, *Federal Expenditures by State for Fiscal Year 1988* (U.S. Government Printing Office, Washington, D.C.), April 1989.

Table 2
Federal Expenditures in Utah Based on Population Statistics
Ranked by Largest Programs
Fiscal Year 1988

Rank	Agency[a]	Program No.[b]	Title	Expend. in Utah[c] (000)	Percent Pop. Driven[d]	Pop. Driven Expend. (000)	Percent of Total
1	HHS	13.714	Medical Assistance Program (Medicaid)	$156,952	50	$78,476	35.38
2	DOT	20.205	Highway Planning & Construction	111,042	50	55,521	25.03
3	HHS	13.780	Family Support Payments (AFDC)	46,464	50	23,232	10.47
4	HHS	13.667	Social Service Block Grants	18,500	100	18,500	8.34
5	HUD	14.218	Community Dev. Block Grants/Entitlement	11,201	50	5,601	2.52
6	ED	84.126	Rehabilitation Services - Basic Support	10,948	50	5,474	2.47
7	ED	84.151	Improving School Program - State Block	4,258	100	4,258	1.92
8	DOT	20.507	Urban Mass Transportation Capital& Operating	10,367	40	4,147	1.87
9	ED	84.048	Vocational Education - Basic Grants to States	6,400	50	3,200	1.44
10	HHS	13.600	Adm. for Children, Youth & Families (Head Start)	4,898	50	2,449	1.10
11	ED	84.010	Educationally Deprived Children - Local	11,794	20	2,359	1.06
12	HHS	13.635	Special Programs for the Aging	2,214	100	2,214	1.00
13	HHS	13.992	Alcohol, Drug Abuse/Mental Health	3,814	50	1,907	0.86
14	HUD	14.219	Community Dev. Block Grants/Small Cities	4,635	40	1,854	0.84
15	EPA	66.418	Construction Grants for Waste Water	11,890	13	1,546	0.70
16	HHS	13.633	Special Programs for the Aging - Home Delivery	1,412	100	1,412	0.64
17	HHS	13.645	Child Welfare Service - State Grants	2,712	50	1,356	0.61
18	DOJ	16.579	State & Local Narcotics Control Assistance	1,271	100	1,271	0.57
19	AG	10.500	Cooperative Extension Service	1,803	50	902	0.41
20	DOT	20.600	State & Community Highway Safety	993	75	745	0.34
21	ED	84.034	Library Services	657	100	657	0.30
22	ED	84.164	State Grants for Strengthening the Skills	675	90	608	0.27
23	HHS	13.141	Alcohol, Drug Abuse Treatment and Rehabilitation	1,191	45	536	0.24
24	AG	10.550	Food Distribution	779	60	467	0.21
25	DOJ	16.540	Juvenile Justice & Delinquency Prevention	389	100	389	0.18
26	HUD	14.850	Public & Indian Housing	1,705	20	341	0.15
27	HUD	14.221	Urban Development Action Grants	2,245	14	314	0.14
28	HHS	13.630	Administration on Developmental Disabilities	413	67	277	0.12
29	DOJ	16.575	Crime Victim Assistance	276	100	276	0.12
30	AG	10.418	Water & Waste Disposal Systems - Rural	408	50	204	0.09
31	AG	10.568	Temporary Emergency Food Assistance	286	60	172	0.08
32	AG	10.203	Payments to Ag. Experiment Stations	575	26	150	0.07
33	ED	84.035	Interlibrary Cooperation & Resource Sharing	146	100	146	0.07
34	FEMA	83.503	Civil Defense - State & Local Emergency	561	25	140	0.06
35	ED	84.049	Vocational Education - Consumer Homemaking	244	50	122	0.06
36	DOE	81.052	Energy Conservation for Institutional Buildings	237	50	119	0.05
37	NFAH	45.129	Promotion of the Humanities - State Program	464	22	102	0.05
38	EPA	66.432	State Public Water System Supervision	334	30	100	0.05
39	EPA	66.801	Hazardous Waste Management - State	430	20	86	0.04
40	ED	84.053	Vocational Education - State Councils	119	50	60	0.03
41	EPA	66.433	State Underground Water Source Protection	133	33	44	0.02
42	DOE	81.041	State Energy Conservation	84	40	34	0.02
43	ED	84.174	Vocational Education - Community Based	49	50	25	0.01
44	DOE	81.050	Energy Extension Service	47	50	24	0.01
Total				$436,015		$221,812	

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[a] Agency Codes

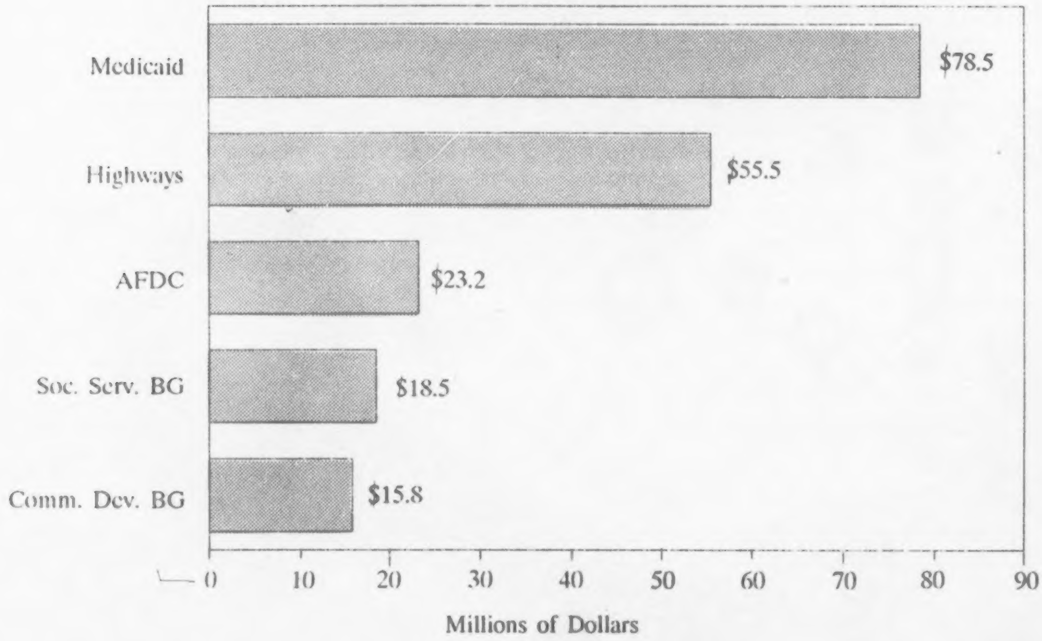
AG	Department of Agriculture	NFAH	National Foundation on the Arts and Humanities
HHS	Health and Human Services	EPA	Environmental Protection Agency
HUD	Housing and Urban Development	DOE	Department of Energy
DOJ	Department of Justice	FEMA	Federal Emergency Management Agency
DOL	Department of Labor	ED	Department of Education
DOT	Department of Transportation		

[b] Catalog of Federal Domestic Assistance (CFDA) number.

[c] Expenditures provided by Federal Funds Information for States (FFIS), November 9, 1989 printout.

[d] The percent population driven taken both from *The Effect of Population Statistics on Federal Funds Distribution* and *1989 Catalog of Federal Domestic Assistance.*

Figure 1
Largest Federal Programs in Utah that
Use Population to Distribute Funds FY 88



These programs vary in the percent of the program that is dependent on population statistics. For example, 100 percent of the money distributed for Social Services Block Grants is tied to the ratio of Utah's population to the U.S. population. In contrast, only 13 percent of the money distributed for the construction of waste water treatment facilities was based on population statistics. Table 2 lists all of the federal programs in 1988 that use population as a basis for distributing federal funds in Utah, ranked in order of magnitude. Figure 1 shows the five largest federal programs that distribute money based on population statistics. Some of the largest federal programs that use population data to distribute funds are described below.

Medicaid

Medicaid is the largest federal program that distributes money to states based on population data. Over 35 percent of the federal money distributed is part of the Medicaid program. Medicaid provides medical assistance on behalf of children, pregnant women, and the aged who are poor. Fifty percent of Medicaid assistance is based on a state's per capita income. As a result, of the $157 million that Utah received for Medicaid during fiscal year 1988, half or $78 million was driven by a population variable.

Highway Planning and Construction

Highway planning and construction is the second most important program with population-dependent funding. Utah received $111 million during fiscal year 1988 to help in the improvement and development of the interstate highway system and primary, secondary and urban streets. Approximately 50 percent of this money came into Utah based on the state's population. Consequently, Utah received over $55 million in highway improvements and development during 1988 as a direct result of population data.

AFDC

The federal government distributed $46 million to Aid to Families with Dependent Children (AFDC) during fiscal year 1988. AFDC funding in Utah uses the same formula as Medicaid and so 50 percent or $23 million came into Utah to assist poor, single-parent families with children under 18 years of age.

Block Grants

Block grants are another example of population-dependent programs. Utah received $18.5 million in Social Service Block Grants (SSBG) during fiscal year

1988. Social Service Block Grants enable states to provide assistance to elderly, handicapped, poor, mentally ill and other individuals in need. All of the federal money distributed for the SSBG program is based on population.

Block grants for community development are also based on population. Community Development Block Grants (CDBG) are used to help develop viable urban communities, by providing a suitable living environment and expanding economic opportunities for persons of low and moderate incomes. Community Development block Grants include an Entitlement Program for cities over 50,000 population and counties over 100,000 population, and a Small Cities Program designed for cities under 50,000 population and counties under 100,000 population. Together these programs brought $15.8 million to Utah during fiscal year 1988 based on population data.

Conclusion

The extent of federal programs and magnitude of money they distribute, based on formulas that use population is significant. During fiscal year 1988, 11 federal agencies distributed $222 million in Utah based on population statistics. In addition to the large programs described above, well-known programs such as Head Start are included; and so are less visible but important programs such as library services, alcohol and drug treatment, crime victim assistance, and hazardous waste management. Considering the aid that these programs provide to Utah, the value of population data cannot be taken lightly, for it has an immense impact on the distribution of federal funds.

State Funds Distributed in Utah Based on Population

During fiscal year 1988, the state of Utah managed a $2.7 billion budget.[4] This amount includes revenues from the state's general, uniform and transportation funds, as well as federal funds, dedicated credits, mineral lease monies, property taxes and other miscellaneous revenues. In addition to these monies, the state of Utah collects and distributes local option sales taxes. While the allocation of these monies can be a complex process that considers competing needs, federal requirements, and changing state priorities, population is an important factor in the allocation of specific funds. The two largest population-driven funds are local option sales taxes and class B and C road monies.

Local Option Sales Taxes

A portion of all sales taxes collected in Utah are distributed among Utah's 246 municipalities. Retailers collect the sales tax and pay it to the State Tax Commission. The tax commission then, after charging an administrative fee, distributes the money to cities and counties based on population and the point of sale.

During fiscal year 1988, the State Tax Commission distributed $107.3 million of local option sales taxes.[5] This distribution was determined based on the following formula: 1) 25 percent based on the percentage that the population of the local government bears to the total population of the state, 2) 75 percent based on the point of sale or use of the transaction. Therefore, over $26.8 million of sales taxes were divided among Utah's municipalities during fiscal year 1988 based on population statistics.

It should be pointed out that on January 1, 1990 the local option sales tax distribution formula began a gradual change to a 50-50 population and point of sale split by July 1993. Consequently, the importance of population data for counties and cities will only become increasingly more important to local government budgets as population becomes a greater factor in distributing sales taxes.

Class B and C Road Money

The second largest state program that distributes money based on population statistics is money for the improvement and maintenance of class B and C roads in the state. Class B roads are county roads and class C roads are city streets. According to the allocation formula, 54 percent of the B and C road monies are allocated based on a municipality's population.

During fiscal year 1988 the state distributed $40.4 million to cities and counties for B and C class road development and improvement. Thus, $21.8 million of the B and C road monies was tied directly to population.

Other Monies Distributed Based on Population

Money for Community Development Block Grants (Small Cities Program) and the liquor control fund are also distributed based on population data.

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[4] **Fiscal years shown in this section are state fiscal years (July 1 through June 30).**

[5] **Utah State Tax Commission, *Annual Report of the Utah State Tax Commission: July 1, 1987 - June 30, 1988.***

Table 3
Major State and Local Funds Distributed in Utah
Based on Population Statistics
Fiscal Year 1988

Title	Total (000)	Percent Population-Driven	Population-Driven Expenditures (000)	Percent of Total
Local Option Sales Taxes	$107,338	25.0	$26,834	49.8
Class B and C Road Monies	40,395	54.0	21,813	40.4
Community Development Block Grants -- Small Cities	4,980	85.7	4,266	7.9
Liquor Control Fund	4,089	25.0	1,022	1.9
Total	$156,801		$53,936	

Sources: Utah Code Annotated; Utah Office of Planning and Budget.

Money for the Small Cities Program of Community Development Block Grants (CDBG) is federal money that is administered by the state. The Utah Department of Community and Economic Development manages the program in Utah. These CDBG monies are unique because they are distributed to Utah by the federal government based partially on Utah's population and then also distributed within Utah based on population. The money is used to build public work facilities, rehabilitate housing, assist with economic development and other activities that make communities more viable and expand economic opportunities. During fiscal year 1988, $4.3 million of CDBG funds for the Small Cities Program was distributed in Utah based on population.

The Liquor Control Fund is also distributed to municipalities in the state based on population. This appropriation is used exclusively for programs or projects related to prevention, detection and prosecution of alcohol-related offenses. During fiscal year 1988, $1 million was allocated to cities and counties in Utah based on their population.

Table 3 shows the major state and local programs/funds that are distributed based on population. In total, the state disbursed nearly $54 million during fiscal year 1988 to municipalities in the state based on population. Because state money is often distributed to municipalities based on population, cities and counties benefit from a complete census count and accurate population estimates.

Conclusion

The decennial census plays a crucial role in assuring that Utah has fair political representation and accurate data for making wise decisions. Beyond these benefits of the census, however, the population data produced by and benchmarked to the census are critical to the distribution of federal and state funds. The purpose of this paper has been to illustrate the magnitude of federal and state dollars that are distributed in Utah based on the decennial census count and population estimates.

This paper has identified $222 million of federal funds and $54 million of state funds that were distributed during 1988 to and within Utah based on population statistics. After adjusting to avoid double counting of the Community Development Block Grant Small Cities Program, population statistics helped distribute $274 million of federal and state funds during 1988. This is equivalent to $162 per person or $523 per household in Utah during 1988. Compounded over a decade, the decennial census and population estimates based on the census count helped distribute an estimated $2.8 billion during the eighties. Clearly, population data means money to Utah and the communities within the state.

Even though 44 federal and four state programs were identified that allocate money based on population, the $274 million quantified is a conservative estimate. Some small programs have not been included and others are likely to have been missed. Furthermore, this research only looked at population data. Many federal and state funds are distributed based on other data generated from or estimates based on the decennial census such as income, education and housing characteristics. As a result, the value of the census in distributing dollars can be considered a conservative estimate.

On April 1, 1990, Utahns will be asked to fill out a census form. The answers provided on this form set the stage for an entire decade of the distribution of federal and state funds. Utahns need to know that over a ten-year period, the census is responsible for bringing in hundreds of millions of dollars to the state to help with critical social service, infrastructure, health, educational, and other needs. Therefore, in Utah the census means money and it is in Utah's self-interest to be counted.

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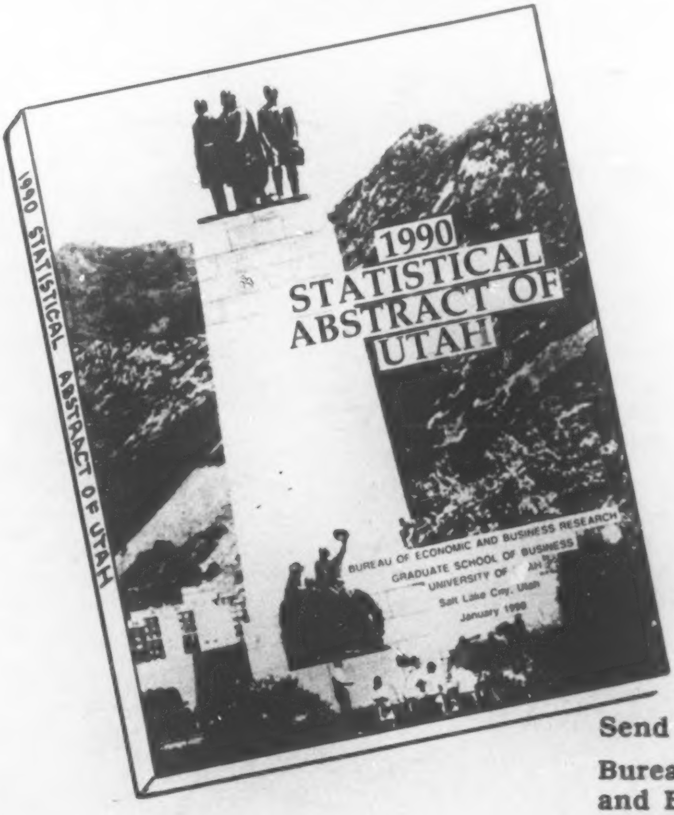
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- SERVICES
- PARKS, RECREATION & TOURISM
- CLIMATE

Utah Business Statistics

UTAH DATA	Sept. 1988	Sept. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	20,752	NA	NA	NA	20,210	NA
New Corporations (no.)	427	513	20.1%	456	465	-2.0%
New Car, Truck, and Motor Home Sales (no.)	4,850	4,795	-1.1%	5,136	5,196	-1.2%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	67.60	69.20	2.4%	71.56	66.62	7.4%
Lambs (cwt)	58.50	62.70	7.2%	62.68	65.48	-4.3%
Milk Wholesale (cwt)	11.90	13.20	10.9%	12.17	11.53	5.5%
Alfalfa Hay, Baled (per ton)	77.00	85.00	10.4%	82.92	73.58	12.7%
Cattle Slaughtered (live weight) (thous. of lbs.)	46,200	48,319	4.6%	47,529	45,886	3.6%
Construction						
Total Construction (thous. of dol.) 1	56,350.7	130,537.0	131.7%	75,465.9	NA	NA
Residential	33,919.9	47,538.0	40.1%	35,828.4	NA	NA
Nonresidential	11,088.4	41,296.0	272.4%	24,344.9	NA	NA
Additions, Alterations, and Conversions	11,342.3	41,703.0	267.7%	15,292.6	NA	NA
Total Permit Construction (thous. of dol.) 2	66,168.0	105,477.3	59.4%	78,607.9	74,66[illegible].9	5.3%
Residential	35,977.5	43,891.6	22.0%	36,379.4	34,241.2	6.2%
Nonresidential	19,497.4	45,793.3	134.9%	28,293.4	27,086.3	4.5%
Additions, Alterations, and Repairs	10,693.1	15,792.4	47.7%	13,935.0	13,335.3	4.5%
New Dwelling Units (no.)	496	563	13.5%	462	475	-2.8%
Employment						
Civilian Labor Force (thous.)	777.2	804.8	3.6%	777.1	754.9	2.9%
Total Employed Persons	741.9	775.5	4.5%	743.3	715.3	3.9%
Unemployed Persons	35.2	29.3	-16.8%	33.9	39.6	-14.5%
Percent Total Labor Force	4.5	3.6	-20.0%	4.4	5.3	-17.1%
Employees on Nonagricultural Payrolls (thous. of jobs)	674.9	705.2	4.5%	679.9	653.7	4.0%
Manufacturing	101.5	104.6	3.1%	101.7	97.4	4.4%
Mining	8.1	8.5	4.9%	7.9	8.3	-4.8%
Contract Construction	28.2	29.2	3.5%	25.3	25.0	1.6%
Transportation, Communication, and Utilities	40.7	41.8	2.7%	40.3	39.0	3.4%
Wholesale Trade	36.0	38.7	7.5%	36.9	35.0	5.3%
Retail Trade	124.5	131.2	5.4%	125.2	119.7	4.6%
Finance, Insurance, and Real Estate	33.3	33.2	-0.3%	33.1	33.4	-0.8%
Services 3	161.1	172.1	6.8%	164.4	153.8	6.9%
Federal Government	39.3	40.2	2.3%	39.9	39.3	1.4%
State Government 4	36.5	38.9	6.6%	39.5	38.3	3.0%
Local Government 4	65.7	66.8	1.7%	65.7	64.5	1.9%
Average Weekly Hours						
Manufacturing	40.9	39.5	-3.4%	39.9	40.3	-0.9%
Mining	39.8	41.3	3.8%	40.6	42.5	-4.5%
Wholesale Trade	37.6	35.8	-4.8%	36.0	38.2	-5.7%
Retail Trade	27.4	27.7	1.1%	27.4	28.0	-2.3%
Amount of Unemployment Compensation (thous. of dol.)	4,023.7	3,483.3	-13.4%	5,176.4	6,076.7	-14.8%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,409.0	2,184.7	-9.3%	2,250.9	2,359.7	-4.6%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	29,842.7	78,971.2	164.6%	155,957.9	144,885.6	7.6%
Sales and Use Tax	2,830.0	556.9	-80.7%	55,990.7	52,111.0	7.4%
Motor Fuel Tax	12,576.5	12,537.9	-0.3%	11,822.7	10,845.4	9.0%
Individual Income Tax	46,307.2	42,483.0	-8.3%	52,306.5	51,869.6	0.8%
Corporation Franchise Tax	11,938.3	16,374.4	37.2%	7,910.5	5,966.0	32.6%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,619.4	NA	NA	NA	4,122.2	NA
Crude Oil (thous. of bbls.)	2,637.7	2,349.7	-10.9%	2,423.8	2,835.1	-14.5%
Natural Gas (mil. of cu. ft.)	21,525.6	22,954.7	6.6%	22,910.8	23,310.2	-1.7%
Coal (thous. short tons)	1,519.0	1,717.0	13.0%	1,485.8	1,547.5	-4.0%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	814,460	957,536	17.6%	956,175	859,030	11.3%
Highway Traffic Count Across State Lines	NA	41,318	NA	37,397	NA	NA
Transient Room Taxes (thous. of dol.)	35.0	-1.1	-103.1%	546.1	561.5	-2.7%
Visits, State, Nat'l. Parks, Monuments (thous.)	1,523.1	1,556.6	2.2%	1,107.7	1,092.1	1.4%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	489,914	503,001	2.7%	497,047	486,385	2.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	183,005	186,485	1.9%	185,044	179,667	3.0%
Electric Customers (Residential)	476,227	483,809	1.6%	482,402	475,586	1.4%
Electric Customers (Commercial)	46,940	48,777	3.9%	47,816	46,608	2.6%
Natural Gas Customers (Residential & Commercial)	455,778	471,469	3.4%	469,294	456,151	2.9%
Natural Gas Customers (Industrial)	552	568	2.9%	563	548	2.7%

Utah Business Statistics

UTAH DATA	Sept. 1988	Sept. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.8r	56.8f	3.6%	54.1	52.4	3.2%
Unemployment Rate	4.7r	4.1	-12.8%	3.9	4.9	-20.1%
Auth. Permit Construction (thous. of dol.)	6,860.4	9,833.0	43.3%	9,269.4	9,459.7	-2.0%
New Dwelling Units (no.)	60	71	18.3%	66	69	-4.6%
Postal Receipts (thous. of dol.)	417.5	582.2	39.4%	564.4	397.0	42.2%
Electric Customers (Residential)	48,172	49,335	2.4%	48,754	47,992	1.6%
Electric Customers (Commercial)	3,477	3,632	4.5%	3,591	3,413	5.2%
Natural Gas Customers (Residential)	50,278	51,670	2.8%	51,508	50,000	3.0%
Natural Gas Customers (Industrial)	53	56	5.7%	55	52	5.1%
Telephone Lines in Service (Mt. Bell)(Residential)	55,683	57,454	3.2%	56,516	55,016	2.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,516	12,106	5.1%	11,820	11,119	6.3%
Salt Lake County						
Non-Ag. Employment (thous.)	345.4r	362.3f	4.9%	350.3	337.8	3.7%
Unemployment Rate	4.6r	3.8	-17.4%	4.0	5.0	-21.1%
Auth. Permit Construction (thous. of dol.)	28,217.2	52,687.7	86.7%	34,064.1	33,791.7	0.8%
New Dwelling Units (no.)	224	190	-15.2%	165	179	-7.8%
Postal Receipts (thous. of dol.)	7,995.9	7,617.0	-4.7%	8,222.7	7,798.6	5.4%
Electric Customers (Residential)	239,007	242,380	1.4%	242,440	238,912	1.5%
Electric Customers (Commercial)	20,405	20,821	2.0%	20,791	20,319	2.3%
Natural Gas Customers (Residential)	218,524	223,253	2.2%	223,704	219,831	1.8%
Natural Gas Customers (Industrial)	239	245	2.5%	241	235	2.4%
Telephone Lines in Service (Mt. Bell)(Residential)	230,838	236,663	2.5%	233,760	229,427	1.9%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,679	113,690	1.8%	112,399	110,667	1.6%
Utah County						
Non-Ag. Employment (thous.)	85.7r	89.0f	3.9%	83.7	79.6	5.1%
Unemployment Rate	4.2r	3.8	-9.5%	3.8	4.9	-23.0%
Auth. Permit Construction (thous. of dol.)	8,836.6	13,353.5	51.1%	12,621.9	10,579.5	19.3%
New Dwelling Units (no.)	72	77	6.9%	72	67	7.6%
Postal Receipts (thous. of dol.)	1,194.9	1,480.2	23.9%	1,364.8	1,105.8	23.4%
Electric Customers (Residential)	52,986	53,322	0.6%	52,962	52,083	1.7%
Electric Customers (Commercial)	6,019	6,735	11.9%	6,082	5,943	2.4%
Natural Gas Customers (Residential)	61,388	62,615	2.0%	62,781	61,412	2.2%
Natural Gas Customers (Industrial)	67	73	9.0%	73	68	7.5%
Telephone Lines in Service (Mt. Bell)(Residential)	65,409	66,845	2.2%	65,972	64,274	2.6%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	20,863	20,074	-3.8%	21,081	19,788	6.5%
Weber County						
Non-Ag. Employment (thous.)	62.8r	65.0f	3.5%	63.6	61.4	3.6%
Unemployment Rate	6.7r	5.2	-22.4%	5.0	6.5	-23.5%
Auth. Permit Construction (thous. of dol.)	3,973.1	8,578.0	115.9%	5,579.8	6,035.8	-7.6%
New Dwelling Units (no.)	38	56	47.4%	45	48	-5.6%
Postal Receipts (thous. of dol.)	739.0	708.8	-4.1%	679.2	651.6	4.2%
Electric Customers (Residential)	53,394	54,142	1.4%	54,061	53,388	1.3%
Electric Customers (Commercial)	4,983	5,036	1.1%	4,991	4,923	1.4%
Natural Gas Customers (Residential)	49,327	50,288	1.9%	50,399	49,624	1.6%
Natural Gas Customers (Industrial)	83	85	2.4%	85	83	1.4%
Telephone Lines in Service (Mt. Bell)(Residential)	46,630	47,605	2.1%	47,159	46,311	1.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,122	12,318	1.6%	12,184	11,674	4.4%

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	Sept. 1988	Sept. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	4,926.9	5,278.9	7.1%	5,152.8	4,792.8	7.5%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,118.6	4,469.7	8.5%	4,340.2	3,995.3	8.6%
Industrial Production Indexes (seasonally adjusted) (1977=100)	138.6	142.4	2.7%	141.1	135.5	4.2%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	435.6	481.2	10.5%	463.4	420.1	10.3%
Net Exports of Goods and Services (bil.) (qtly.)	-66.2	-53.5	-19.2%	-57.2	-84.6	-32.4%
Exports of Goods and Services (bil.) (qtly.)	556.8	623.3	11.9%	608.7	523.4	16.3%
Imports of Goods and Services (bil.) (qtly.)	623.0	676.8	8.6%	665.9	608.0	9.5%
Index of Leading Indicators (1982=100)	143.7	145.2	1.0%	144.8	141.9	2.0%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	119.8	[illegible]	4.3%	122.6	117.0	4.8%
CPI-U (All Urban Consumers) Food & Beverages	120.1	[illegible]	4.8%	123.3	116.7	5.6%
CPI-U (All Urban Consumers) Housing	119.9	124.3	3.7%	121.8	117.4	3.8%
CPI-U (All Urban Consumers) Transportation	109.7	113.7	3.6%	113.0	108.0	4.6%
CPI-U (All Urban Consumers) Medical Care	140.4	151.7	8.0%	146.3	136.4	7.3%
CPI-U (All Urban Consumers) Energy	91.9	95.9	4.4%	93.2	89.2	4.5%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	108.6	113.5	4.5%	112.2	107.1	4.8%
GNP Price Deflator (1982=100) (qtly.)	121.9	126.9	4.1%	125.2	120.1	4.2%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	122.0	124.0	1.6%	123.4	121.2	1.8%
Total Civilian Employment (mil.)	115.4	117.5	1.8%	116.9	114.4	2.2%
Unemployment Rate	5.4	5.3	-1.9%	5.3	5.6	-6.9%
Construction						
Total Construction (mil. of dol.)	22,669.6	23,371.4	3.1%	20,740.4	21,611.6	-4.0%
Residential	10,519.2	10,159.3	-3.4%	9,925.0	10,033.8	-1.1%
Nonresidential	8,019.3	8,785.9	9.6%	7,136.3	7,666.5	-6.9%
Non-Building	4,131.1	4,426.2	7.1%	3,679.0	3,911.3	-5.9%
New Dwelling Units (no.)	126,810	114,025	-10.1%	114,013	122,237	-6.7%
Interest Rates						
Federal Funds Rate	8.19	9.02	10.1%	9.18	7.18	27.9%
Short Term (3-month Treasury bill rate)	7.23	7.72	6.8%	8.13	6.25	30.2%
Long Term (30-year Treasury bond yields)	9.06	8.31	-8.3%	8.83	9.03	-2.2%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	10.00	10.50	5.0%	10.79	8.99	20.1%
Mortgage Rates (new homes)	8.90	9.86	10.8%	9.56	8.79	8.7%

Sources: *Business Conditions Digest,* U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Business Expenditures for New Plant Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

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1989 POPULATION ESTIMATES FOR UTAH AND ITS COUNTIES

Brad T. Barber and Jeanine M. Taylor*

According to the estimates from the Population Estimates Committee, the population of Utah reached 1,715,000 as of July 1, 1989, which represents an increase of 20,000, or 1.2 percent over the 1988 figure of 1,695,000. Utah's estimate includes the preliminary natural increase of 26,633 persons, and an implied net out-migration of over 6,300. Although Utah's population has increased in each year of the 1980's, the growth occurred from 1980 to 1988 at a decreasing rate. This year marked the first year during the 1980's that the population growth rate has increased over the previous year. The U.S. population increase was estimated to be 1.0 percent for 1989.

Among Utah's 29 counties, 17 gained population from 1988 to 1989. Five counties declined in population while seven remained unchanged. Most of Utah's population increase occurred in three of the Wasatch Front Counties: Davis, Salt Lake and Utah. Salt Lake County increased by 7,000, Utah County by 5,000 and Davis County by 3,000. These three counties accounted for 75 percent of the total growth in the state. Washington County continues to lead all counties in rate of growth with a population increase of 4.9 percent, followed by Summit and Morgan Counties at 4.5 and 2.6 percent respectively.

Natural increase, which is the measure of births minus deaths, was the second lowest number since 1976. The period from July 1, 1988 through June 30, 1989, showed a slight decrease (0.3 percent) in births, compared to the previous 12 months. Deaths during the same period also decreased from 9,122 to 8,916 -- a 2.3 percent decline. This resulted in a fairly constant overall natural increase as compared to the previous year.

Utah continued to experience net out-migration in 1989, though at a lower level than the previous four years. The out-migration trend has now continued for six years. Because of 1989's healthy economic performance, continued out-migration is perplexing. The best explanation appears to be that many of the new jobs created are not household sustaining, do not attract workers from out-of-state, or keep people from looking in other states for employment. The out-migration phenomenon is as much a product of prosperity in other states as it is a problem in Utah's own economy. Although Utah is experiencing good growth, many other areas in the West are also growing well and can sometimes offer Utah workers higher wages. The net out-migration in 1989, however, is approximately 6,300, significantly less than the 11,500 experienced last year. The 1989 state rate of out-migration was 0.4 percent, which means that the excess "out-movers" over "in-movers" amounted to 0.4 percent of the 1988 population. This is almost half the rate of out-migration that occurred in the previous year.

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*Brad T. Barber is director of the Demographic and Economic Analysis (DEA) section of the Utah State Office of Planning and Budget, and chairman of the Utah Population Estimates Committee; Jeanine M. Taylor is an economist, DEA, Office of Planning and Budget.

The rate of out-migration was once again highest in Utah's rural counties, led by Daggett, Duchesne, Uintah and Rich. In fact, many of these counties had net out-migration which exceeded natural increase, resulting in a decline in the total population. However, only half as many counties had a net decline in population as compared to 1988.

It is customary for the Population Estimates Committee to revise the previous year's estimate in order to reach a consensus with the U.S. Bureau of the Census at the state level. However, it was the decision of the Committee that the estimate produced by the Bureau of the Census for 1988 varied too significantly from the Committee's estimate and a revision would distort growth trends. Therefore, no revision was made. These differences with the Bureau of the Census will not be long lasting, as the decennial census is but a few months away. Also it should be noted that numerous differences occur between the Population Estimates Committee's county estimates and those of the Bureau of the Census.

Figure 1 presents the percentage changes in population for each of the counties from 1988 to 1989. Figure 2 displays the percent change in population by county for the period 1980-1989. Table 1 offers the revised and preliminary population estimates by county, multi-county districts (MCD) and metropolitan statistical areas (MSA) for 1980 through 1989. Table 2 presents total natural increase and total "residual" net migration by county for the 1980-1989 period, along with the past two individual years. Table 3 offers births, deaths and natural increase for calendar and fiscal years 1970 through 1988-1989; while Table 4 shows the population density for each county for 1980, 1988 and 1989. Table 5 presents the derivation of the Committee's preliminary July 1, 1989 estimates based upon the 1988 state population total.

Growth in the 1980's

The population estimate for Utah was 1,474,000 as of July 1, 1980. Since that time, the population has grown by approximately 241,000 persons, which translates into a 1.7 percent average annual growth rate for the 1980's. This rate compares to the national average annual growth of 1.0 percent for the 1980's.

Population change over time is a result of two phenomena: 1) natural increase, or births minus deaths; and 2) net migration. As stated earlier, the total increase in population in the state for the 1980's has been due to natural increase; however, the following is a brief description of population change in the 1980's on the county level. These population changes, increases and decreases, are a result of adding natural increase plus net (either in or out) migration to the 1980 population base. Figure 2 displays the total percent changes in county population for the period 1980-1989.

The first three years in the 1980's showed net in-migration, while the last six years have shown net out-migration. Natural increase totalled 265,492 for the past nine years. Given the population increase of 241,000, there is an implied "residual" net out-migration, over the past nine years, of over 24,000 persons. In other words, the residual of total population change minus natural increases equals net migration. Net out-migration occurs when the total observed change in population is smaller than the natural increase alone. Net in-migration occurs when the observed population change is greater than that measured by natural increase alone.

Although the four metropolitan counties -- Davis, Weber, Salt Lake and Utah -- accounted for almost 78 percent of the population growth in the state in the last nine years, all of the increase was due to natural increase. The natural increase for the four counties was 207,596 while the increase in the population was 187,000. This implies a net out-migration of almost 20,600 persons for the four counties.

In terms of net migration, Washington, Davis, Millard, Summit and Cache had net in-migration of over 1,000 persons for the nine-year period, while 11 counties had net out-migration of over 1,000 persons for the same period. This does not necessarily mean that there is a net decrease in population; that will happen only if net out-migration is greater than natural increase. Total net migration by county for the last nine years as a percent of each county's 1980 population estimate is presented in Figure 3.

Organization and Procedure

Coordination and staffing of the Utah Population Estimates Committee is the responsibility of the Demographic and Economic Analysis (DEA) Section of the Utah Office of Planning and Budget. The Committee's estimates represent the official estimate for the state and its counties. A listing of Committee members appears on the last page of this article.

The Committee's participation in the Federal-State Cooperative Program for Local Population Estimates provides for an exchange of data with the federal government and an opportunity to improve the quality of the state and county estimates by both parties.

Methodology for Estimating Population

For the past several years, the Utah Population Estimates Committee has utilized two population estimating methods -- school enrollment and L.D.S. Church membership -- in calculating its state and county estimates. At its November and December 1989 meetings, the Committee reviewed the population estimates derived from these two methods. Employment and new utility connection data were used as supplemental data to the estimates to assure consistency.

The 1990 Census will provide the data needed to evaluate the methodologies used for the intercensal years, 1981-1989. A complete study of the methodologies will be completed as soon as population data are received in early 1991.

School Enrollment Method

The school enrollment method utilizes data from Fall 1989 school enrollment changes as an indicator of net migration, along with fiscal year 1989 birth and death records as a measure of natural increase. The Utah Population Estimates Committee, like the Bureau of the Census, relies heavily upon school enrollment data as an indicator of migration. Since the state does not collect migration statistics, it is important to note that these migration numbers are derived estimates -- they are not an actual count.

The school enrollment method compares a county's survived enrollment (calculated by applying survival rates to the enrollment count) in grades 1-8 for October 1988, to grades 2-9 for October 1989. The difference between these two enrollment totals is taken to be net student migration for the county. Total net migration for the county is then derived by multiplying the county's student migration estimate by the county-specific total population-to-student ratio. This ratio is defined as the total population estimate of the county for 1988 divided by the 1988 grades 1-8 school enrollment.

The second component of the school enrollment method is the calculation of natural increase in the county. Natural increase for any year is defined as the number of births minus the number of deaths. The 1989 population estimates are determined, in part, by the number of resident births and deaths that occurred from July 1, 1988 to June 30, 1989. The count of births and deaths occurring to Utah residents for the fiscal year 1989 can be found in Table 3.

Preliminary births in fiscal year 1989 were 35,549, a slight decrease from 1988, but still the second lowest number of births since 1976. The crude birthrate (births during the calendar year per 1,000 population on July 1) has dropped from 28.3 in 1980 to 21.0 in 1988, while the U.S. crude birthrate held virtually constant: 15.9 in 1980 and 15.7 in 1988. The total number of deaths, with few reversals, has increased each year since 1980. However, deaths per 1,000 population have stayed fairly constant — 5.5 per 1,000 population in 1980 and 5.4 per 1,000 population in 1988.

The school enrollment method, as described above, is limited in estimating migration among the retired, college students, single persons and other groups that are not represented in school enrollment estimates.

L.D.S. Membership Method

The L.D.S. Church annually audits its records and enumerates the members residing in each county of the state. The Committee uses this information to produce a set of county-level population estimates. The L.D.S. membership method uses a total population to L.D.S. membership ratio which is obtained by dividing 1988's population by the 1988 L.D.S. membership. This ratio is applied to the current L.D.S. membership to obtain a county population estimate. This method is relatively accurate in areas with high proportions of L.D.S. membership and low migration rates.

Local Coordination

At the Committee's December 1989 meeting, the preliminary 1989 county and state population estimates were reviewed and approved. The respective county estimates were then sent to each county commission and to the seven Associations of Government for review and comment. A number of telephone calls were received and there will be an investigation of several issues raised as a result of these communications. The local coordination effort is an important component of the estimation process. Although there will always be small differences between the Committee's estimates and estimates developed by local governments, it does assure the Committee that no major problems exist. The Committee is dedicated to keeping local governments informed of changes in estimation data and procedures.

Table 1
Population Estimates by County, MCD and MSA

COUNTY	7/1/80	7/1/81	7/1/82	7/1/83	7/1/84	7/1/85	7/1/86	7/1/87	7/1/88[a]	7/1/89[b]	% Change 1980-89
BEAVER	4,400	4,600	4,650	5,000	5,150	5,050	4,950	4,900	4,800	4,800	9.09
BOX ELDER	33,500	34,000	34,700	35,300	35,800	36,600	37,300	37,800	38,000	38,400	14.63
CACHE	57,700	59,800	62,000	64,500	65,600	66,700	67,800	69,200	70,600	71,700	24.26
CARBON	22,400	23,100	24,700	24,500	23,700	23,400	23,000	22,500	22,000	21,500	-4.02
DAGGETT	750	850	850	750	750	700	700	700	700	650	-13.33
DAVIS	148,000	153,000	158,000	162,000	166,000	170,000	175,000	179,000	184,000	187,000	26.35
DUCHESNE	12,700	13,100	13,700	14,400	14,800	14,700	14,300	13,700	13,100	12,800	0.79
EMERY	11,600	12,100	13,000	13,100	12,400	11,800	11,800	11,600	11,300	11,300	-2.59
GARFIELD	3,700	3,700	3,750	3,950	3,950	4,050	4,050	4,050	4,050	4,100	10.81
GRAND	8,250	8,400	8,100	7,950	7,650	7,050	6,850	6,700	6,550	6,500	-21.21
IRON	17,500	17,900	18,300	18,900	19,300	19,400	19,500	19,500	19,200	19,500	11.43
JUAB	5,550	5,600	5,700	5,900	6,150	6,250	5,800	5,700	5,700	5,800	4.50
KANE	4,050	4,050	4,150	4,350	4,500	4,700	4,800	4,850	4,900	4,900	20.99
MILLARD	9,050	9,600	10,400	11,400	13,500	14,200	13,600	13,000	12,900	13,000	43.65
MORGAN	4,950	5,050	5,200	5,250	5,350	5,450	5,500	5,650	5,700	5,850	18.18
PIUTE	1,350	1,400	1,350	1,450	1,500	1,550	1,550	1,550	1,550	1,550	14.81
RICH	2,150	2,250	2,400	2,300	2,150	2,100	2,050	1,950	1,850	1,850	-13.95
SALT LAKE	625,000	640,000	655,000	667,000	679,000	689,000	697,000	701,000	705,000	712,000	13.92
SAN JUAN	12,400	12,700	12,600	13,000	12,800	12,500	12,700	12,900	12,900	13,000	4.84
SANPETE	14,800	15,400	16,100	16,900	17,000	16,900	16,500	16,600	16,700	16,800	13.51
SEVIER	14,900	15,200	15,500	15,800	16,100	16,200	15,800	15,900	15,900	16,000	7.38
SUMMIT	10,400	10,900	11,300	11,800	12,200	12,400	12,700	13,300	13,400	14,000	34.62
TOOELE	26,200	26,800	27,100	27,300	28,200	28,300	28,100	28,100	27,800	27,800	6.11
UINTAH	20,700	21,900	24,300	25,300	24,500	24,000	23,000	21,800	21,500	21,000	1.45
UTAH	220,000	228,000	235,000	242,000	247,000	250,000	253,000	258,000	262,000	267,000	21.36
WASATCH	8,650	8,900	8,750	9,050	9,200	9,200	9,450	9,700	9,800	10,000	15.61
WASHINGTON	26,400	27,700	29,400	30,700	32,600	35,700	39,100	41,300	43,000	45,100	70.83
WAYNE	1,950	2,000	2,000	2,150	2,150	2,100	2,100	2,050	2,100	2,100	7.69
WEBER	145,000	148,000	151,000	154,000	155,000	155,000	157,000	157,000	158,000	159,000	9.66
MCD											
Bear River	93,350	96,050	99,100	102,100	103,550	105,400	107,150	108,950	110,450	111,950	19.93
Wasatch Front	949150	972850	996300	1015550	1033550	1047750	1062600	1,070,750	1,080,500	1,091,650	15.01
Mountainland	239,050	247,800	255,050	262,850	268,400	271,600	275,150	281,000	285,200	291,000	21.73
Central	47,600	49,200	51,050	53,600	56,400	57,200	55,350	54,800	54,850	55,250	16.07
Southwest	56,050	57,950	60,250	62,900	65,500	68,900	72,400	74,600	75,950	78,400	39.88
Uintah Basin	34,150	35,850	38,850	40,450	40,050	39,400	38,000	36,200	35,300	34,450	0.88
Southeast	54,650	56,300	58,400	58,550	56,550	54,750	54,350	53,700	52,750	52,300	-4.30
MSA											
Salt Lake-Ogden MSA	918,000	941,000	964,000	983,000	1,000,000	1,014,000	1,029,000	1,037,000	1,047,000	1,058,000	15.25
Provo-Orem MSA	220,000	228,000	235,000	242,000	247,000	250,000	253,000	258,000	262,000	267,000	21.36
STATE OF UTAH	1,474,000	1,516,000	1,559,000	1,596,000	1,624,000	1,645,000	1,665,000	1,680,000	1,695,000	1,715,000	16.35

[a] Revised

[b] Preliminary

Note: Historical state totals may vary slightly with Bureau of the Census estimates because of recent revisions by the Census Bureau.

Table 2
Components of Change
1980-1989, 1987-1988, 1988-1989

	Total 1980 to 1989		1987 to 1988		Preliminary 1988 to 1989	
	Natural Increase	Net Migration[a]	Natural Increase	Net Migration[a]	Natural Increase	Net Migration[a]
BEAVER	484	(71)	30	(84)	27	(3)
BOX ELDER	5,483	(534)	548	(220)	540	(178)
CACHE	12,638	1,337	1,298	137	1,348	(320)
CARBON	2,653	(3,540)	187	(672)	134	(710)
DAGGETT	112	(228)	9	14	7	(65)
DAVIS	29,285	9,997	3,239	756	3,278	397
DUCHESNE	2,708	(2,636)	199	(769)	219	(598)
EMERY	2,157	(2,557)	138	(391)	139	(190)
GARFIELD	508	(161)	23	(39)	53	(46)
GRAND	890	(2,669)	56	(217)	41	(99)
IRON	3,115	(1,079)	287	(552)	303	(24)
JUAB	781	(577)	52	(44)	63	17
KANE	557	284	38	6	68	(51)
MILLARD	1,928	2,072	175	(152)	176	(65)
MORGAN	665	231	49	(24)	54	119
PIUTE	61	161	(4)	45	2	(6)
RICH	382	[illegible]	26	(128)	23	(44)
SALT LAKE	105,499	(17,997)	10,821	(6,123)	10,681	(4,196)
SAN JUAN	2,177	(1,553)	220	(215)	234	(173)
SANPETE	1,981	62	167	33	159	(106)
SEVIER	1,947	(807)	138	(94)	159	(144)
SUMMIT	1,731	1,720	163	(40)	188	203
TOOELE	3,554	(1,957)	310	(541)	294	(408)
UINTAH	4,496	(4,269)	329	(523)	314	(901)
UTAH	52,301	(5,157)	5,337	(1,545)	5,430	267
WASATCH	1,342	20	143	(87)	108	125
WASHINGTON	5,294	13,307	564	1,251	580	1,365
WAYNE	252	(107)	14	25	12	2
WEBER	20,511	(6,744)	1,970	(1,241)	1,979	(517)
STATE TOTAL	265,492	(24,115)	26,526	(11,435)	26,633	(6,347)

[a] Based on unrounded population estimates.

Table 3
Resident Utah Births, Deaths and Natural Increase
Calendar and Fiscal Years, 1970-1988/1989

	Calendar Year (Year Ending 12/31)			Fiscal Year (Year Ending 6/30)		
Year	Births	Deaths	Natural Increase	Births	Deaths	Natural Increase
1970	26,969	7,063	19,906	25,601	6,927	18,674
1971	27,552	7,245	20,307	27,407	7,207	20,200
1972	26,911	7,323	19,588	27,146	7,236	19,910
1973	27,978	7,573	20,405	27,562	7,517	20,045
1974	29,946	7,380	22,566	28,876	7,496	21,380
1975	31,667	7,519	24,148	30,566	7,515	23,051
1976	35,310	7,472	27,838	33,773	7,378	26,395
1977	37,956	7,612	30,344	36,709	7,595	29,114
1978	38,811	7,871	30,940	38,265	7,687	30,578
1979	41,078	7,871	33,207	40,134	7,846	32,288
1980	41,786	8,103	33,683	41,591	8,108	33,483
1981	41,286	8,263	33,023	41,511	8,112	33,399
1982	41,537	8,502	33,035	41,774	8,404	33,370
1983	39,441	8,484	30,957	40,557	8,346	32,211
1984	38,286	8,944	29,342	38,643	8,886	29,757
1985	37,441	9,044	28,397	37,508	8,923	28,585
1986	36,383	8,886	27,497	37,145	8,790	28,355
1987	35,285	9,055	26,230	35,469	8,813	26,656
1988	36,040	9,185	26,855	35,648	9,122	26,526
1989	Na	Na	Na	35,549	8,916	26,633

Na - Not available

Table 4
Utah Population Density by County
1980, 1988, 1989

	Land Area		April 1, 1980 Population		July 1, 1988 Population		July 1, 1989 Population	
COUNTY	Sq. Mi.	Sq. Km.	Count	per Sq. Mi.	Estimate[a]	per Sq. Mi.	Estimate[b]	per Sq. Mi.
BEAVER	2,568	6,698	4,378	1.7	4,800	1.9	4,800	1.9
BOX ELDER	5,614	14,539	33,222	5.9	38,000	6.8	38,400	6.8
CACHE	1,171	3,033	57,176	48.8	70,600	60.3	71,700	61.2
CARBON	1,479	3,831	22,179	15.0	22,000	14.9	21,500	14.5
DAGGETT	699	1,810	769	1.1	700	1.0	650	0.9
DAVIS	299	775	146,540	490.1	184,000	615.4	187,000	625.4
DUCHESNE	3,234	8,375	12,565	3.9	13,100	4.1	12,800	4.0
EMERY	4,449	11,523	11,451	2.6	11,300	2.5	11,300	2.5
GARFIELD	5,148	13,333	3,673	0.7	4,050	0.8	4,100	0.8
GRAND	3,689	9,554	8,241	2.2	6,550	1.8	6,500	1.8
IRON	3,302	8,551	17,349	5.3	19,200	5.8	19,500	5.9
JUAB	3,396	8,796	5,530	1.6	5,700	1.7	5,800	1.7
KANE	3,898	10,095	4,024	1.0	4,900	1.3	4,900	1.3
MILLARD	6,818	17,659	8,970	1.3	12,900	1.9	13,000	1.9
MORGAN	603	1,562	4,917	8.2	5,700	9.5	5,850	9.7
PIUTE	759	1,965	1,329	1.8	1,550	2.0	1,550	2.0
RICH	1,034	2,679	2,100	2.0	1,850	1.8	1,850	1.8
SALT LAKE	756	1,959	619,066	818.9	705,000	932.5	712,000	941.8
SAN JUAN	7,725	20,008	12,253	1.6	12,900	1.7	13,000	1.7
SANPETE	1,586	4,109	14,620	9.2	16,700	10.5	16,800	10.6
SEVIER	1,910	4,946	14,727	7.7	15,900	8.3	16,000	8.4
SUMMIT	1,865	4,831	10,198	5.5	13,400	7.2	14,000	7.5
TOOELE	6,919	17,921	26,033	3.8	27,800	4.0	27,800	4.0
UINTAH	4,479	11,600	20,506	4.6	21,500	4.8	21,000	4.7
UTAH	2,018	5,226	218,106	108.1	262,000	129.8	267,000	132.3
WASATCH	1,191	3,084	8,523	7.2	9,800	8.2	10,000	8.4
WASHINGTON	2,422	6,272	26,065	10.8	43,000	17.8	45,100	18.6
WAYNE	2,461	6,373	1,911	0.8	2,100	0.9	2,100	0.9
WEBER	566	1,465	144,616	255.5	158,000	279.2	159,000	280.9
STATE TOTAL	82,076	212,572	1,461,037	17.8	1,695,000	20.7	1,715,000	20.9

[a] Revised
[b] Preliminary

Figure 1
Population Growth of Utah Counties
Percent Change 1988 to 1989

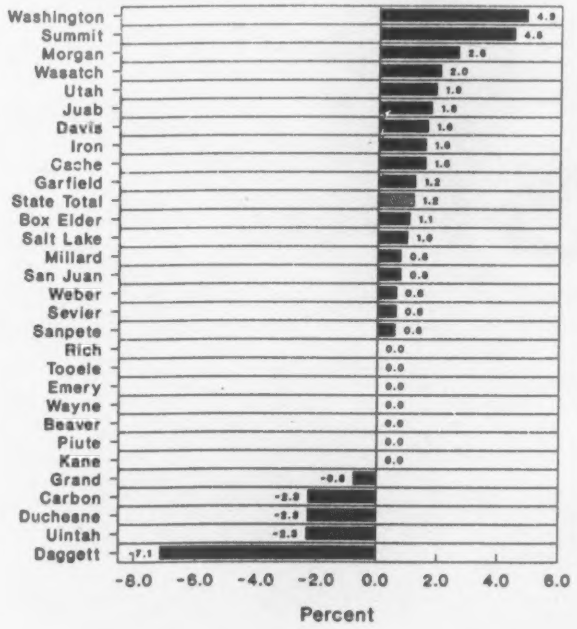


Figure 2
Population Growth of Utah Counties
Percent Change 1980 to 1989

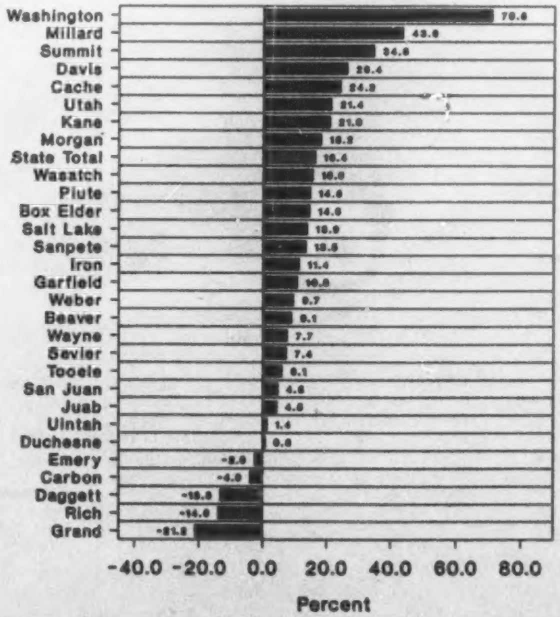
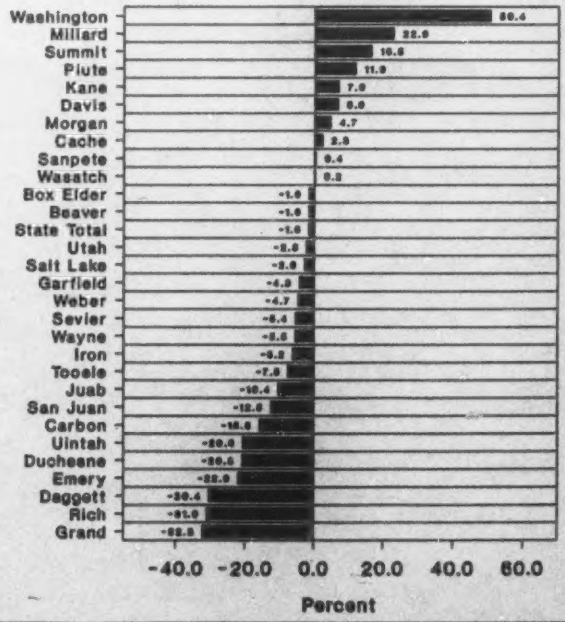


Figure 3
Net Migration from 1980 to 1989 as a
Percent of 1980 Population by County



Source: Ut Population Est Committee

Table 5
Derivation of 1989 County Population Estimates

	1988 July 1, 1988 Population Estimate	Fall 1989 School Enrollment Method	1989 L.D.S. Membership Method	1989 Population Estimates Average	July 1, 1989 Preliminary Population Estimates	1988-1989 Percentage Change
BEAVER	4,800	4,857	4,765	4,811	4,800	0.0
BOX ELDER	38,000	38,494	38,340	38,417	38,400	1.1
CACHE	70,600	71,180	72,182	71,681	71,700	1.6
CARBON	22,000	21,477	21,458	21,468	21,500	-2.3
DAGGETT	700	607	689	648	650	-7.1
DAVIS	184,000	187,791	186,566	187,179	187,000	1.6
DUCHESNE	13,100	12,625	12,852	12,739	12,800	-2.3
EMERY	11,300	11,362	11,121	11,242	11,300	0.0
GARFIELD	4,050	3,940	4,203	4,072	4,100	1.2
GRAND	6,550	6,594	6,371	6,483	6,500	-0.8
IRON	19,200	19,355	19,617	19,486	19,500	1.6
JUAB	5,700	5,971	5,580	5,776	5,800	1.8
KANE	4,900	4,941	4,873	4,907	4,900	0.0
MILLARD	12,900	13,053	13,032	13,043	13,000	0.8
MORGAN	5,700	5,951	5,765	5,858	5,850	2.6
PIUTE	1,550	1,668	1,454	1,561	1,550	0.0
RICH	1,850	1,866	1,830	1,848	1,850	0.0
SALT LAKE	705,000	710,578	713,422	712,000	712,000	1.0
SAN JUAN	12,900	13,012	12,999	13,006	13,000	0.8
SANPETE	16,700	16,921	16,668	16,795	16,800	0.6
SEVIER	15,900	16,218	15,795	16,007	16,000	0.6
SUMMIT	13,400	14,159	13,457	13,808	14,000	4.5
TOOELE	27,800	27,590	27,970	27,780	27,800	0.0
UINTAH	21,500	21,169	20,716	20,943	21,000	-2.3
UTAH	262,000	266,799	268,240	267,520	267,000	1.9
WASATCH	9,800	10,048	9,981	10,015	10,000	2.0
WASHINGTON	43,000	45,003	45,086	45,045	45,100	4.9
WAYNE	2,100	2,176	2,003	2,090	2,100	0.0
WEBER	158,000	159,541	158,771	159,156	159,000	0.6
STATE TOTAL	1,695,000	1,714,946	1,715,806	1,715,376	1,715,000	1.2

Population Estimates Committee

Brad T. Barber, Chairman
Utah Office of Planning and Budget

Bruce Bailey
Utah Foundation

John E. Brockert
Utah Department of Health

Walter Busse
Church of Jesus Christ of
Latter-day Saints

Richard Oldroyd
Commission on Criminal and
Juvenile Justice

Frank Hachman
Bureau of Economic and
Business Research
University of Utah

Kenneth E. Jensen
Utah Department of Employment
Security

Yun Kim
Population Research Lab

Marvin I. Levy
Utah Department of Health

Gery Moore
Utah Department of Health

Rodger Weaver
Utah Division of Public
Utilities

Jewell Rasmussen
Department of Economics
University of Utah

Ross Reeve
Utah Power and Light

Hal Robbins
Utah Office of Education

Bruce Slater
Utah Department of Health

Jeanine M. Taylor
Utah Office of Planning
and Budget

Susan Davis
Mountain Fuel Supply

Tom Williams
Utah State Tax Commission

Utah Business Statistics

UTAH DATA	Oct. 1988	Oct. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	21,449	NA	NA	NA	20,342	NA
New Corporations (no.)	323	430	33.1%	465	452	2.7%
New Car, Truck, and Motor Home Sales (no.)	4,833	4,685	-3.1%	5,123	5,203	-1.5%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	70.60	71.40	1.1%	71.63	67.18	6.6%
Lambs (cwt)	61.80	57.40	-7.1%	62.32	64.83	-3.9%
Milk Wholesale (cwt)	12.40	13.70	10.5%	12.28	11.56	6.2%
Alfalfa Hay, Baled (per ton)	79.00	85.00	7.6%	83.42	74.42	12.1%
Cattle Slaughtered (live weight) (thous. of lbs.)	47,341	51,315	8.4%	47,860	46,210	3.6%
Construction						
Total Construction (thous. of dol.) 1	71,377.7	77,059.7	8.0%	75,292.3	NA	NA
Residential	38,634.2	40,285.3	4.3%	35,642.1	NA	NA
Nonresidential	20,690.1	24,081.1	16.4%	24,538.5	NA	NA
Additions, Alterations, and Conversions	12,053.4	12,693.3	5.3%	15,111.7	NA	NA
Total Permit Construction (thous. of dol.) 2	74,169.4	85,729.6	15.6%	79,571.2	73,093.5	8.9%
Residential	40,312.8	40,918.5	1.5%	36,429.9	34,493.9	5.6%
Nonresidential	18,920.4	30,987.4	63.8%	29,299.0	25,175.0	16.4%
Additions, Alterations, and Repairs	14,936.2	13,823.7	-7.4%	13,842.3	13,424.7	3.1%
New Dwelling Units (no.)	516	524	1.6%	462	477	-3.0%
Employment						
Civilian Labor Force (thous.)	769.7	801.3	4.1%	780.1	756.0	3.2%
Total Employed Persons	739.8	773.4	4.5%	746.6	717.2	4.1%
Unemployed Persons	30.0	27.9	-7.0%	33.5	38.8	-13.7%
Percent Total Labor Force	3.9	3.5	-10.3%	4.3	5.1	-16.5%
Employees on Nonagricultural Payrolls (thous. of jobs)	673.6	706.7	4.9%	683.0	655.8	4.1%
Manufacturing	101.5	104.8	3.3%	102.2	97.9	4.3%
Mining	7.9	8.5	7.6%	8.0	8.3	-4.0%
Contract Construction	27.2	29.2	7.4%	25.5	25.0	2.3%
Transportation, Communication, and Utilities	40.5	41.8	3.2%	40.4	39.2	3.3%
Wholesale Trade	36.4	38.7	6.3%	37.2	35.2	5.7%
Retail Trade	123.4	130.7	5.9%	126.0	120.1	4.8%
Finance, Insurance, and Real Estate	33.4	33.1	-0.9%	33.1	33.4	-0.8%
Services 3	159.2	171.2	7.5%	165.1	154.5	6.9%
Federal Government	39.1	40.5	3.6%	40.0	39.3	1.6%
State Government 4	39.2	40.9	4.3%	39.7	38.4	3.3%
Local Government 4	66.1	67.3	1.8%	65.8	64.6	1.8%
Average Weekly Hours						
Manufacturing	41.0	40.6	-1.0%	39.9	40.4	-1.3%
Mining	39.5	40.5	2.5%	40.6	42.3	-4.0%
Wholesale Trade	37.6	36.5	-2.9%	35.9	38.1	-5.6%
Retail Trade	27.3	27.4	0.4%	27.3	28.0	-2.4%
Amount of Unemployment Compensation (thous. of dol.)	3,610.0	3,374.3	-6.5%	5,156.7	5,976.8	-13.7%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,401.9	2,175.0	-9.4%	2,231.9	2,353.6	-5.2%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	118,489.8	321,660.4	171.5%	172,888.7	147,601.2	17.1%
Sales and Use Tax	32,256.0	171,813.9	432.7%	67,620.5	53,210.3	27.1%
Motor Fuel Tax	13,551.6	11,792.4	-13.0%	11,676.1	10,935.5	6.8%
Individual Income Tax	49,916.8	66,016.2	32.3%	53,648.1	53,853.5	-0.4%
Corporation Franchise Tax	9,678.0	-6,822.2	-170.5%	6,535.5	5,965.1	9.6%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,448.7	NA	NA	NA	4,181.7	NA
Crude Oil (thous. of bbls.)	2,724.2	2,409.2	-11.6%	2,397.5	2,808.2	-14.6%
Natural Gas (mil. of cu. ft.)	22,417.8	23,893.1	6.6%	23,033.8	23,094.0	-0.3%
Coal (thous. short tons)	1,388.0	1,828.0	31.7%	1,522.4	1,520.4	0.1%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	796,415	952,412	19.6%	969,175	861,473	12.5%
Highway Traffic Count Across State Lines	40,603	41,914	3.2%	37,506	NA	NA
Transient Room Taxes (thous. of dol.)	275.6	1,557.9	465.3%	652.9	563.8	15.8%
Visits, State, Nat'l. Parks, Monuments (thous.)	1,004.7	973.0	-3.2%	1,105.1	1,101.6	0.3%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	492,321	506,176	2.8%	498,201	487,112	2.3%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	183,361	186,334	1.6%	185,291	180,117	2.9%
Electric Customers (Residential)	477,303	NA	NA	NA	475,919	NA
Electric Customers (Commercial)	46,939	NA	NA	NA	46,691	NA
Natural Gas Customers (Residential & Commercial)	457,494	NA	NA	NA	457,314	NA
Natural Gas Customers (Industrial)	556	NA	NA	NA	548	NA

Utah Business Statistics

UTAH DATA	Oct. 1988	Oct. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.9r	56.7f	3.3%	54.4	52.7	3.3%
Unemployment Rate	4.2r	4.1	−2.4%	3.9	4.8	−19.3%
Auth. Permit Construction (thous. of dol.)	7,200.4	16,199.4	125.0%	10,019.3	9,409.2	6.5%
New Dwelling Units (no.)	74	88	18.9%	67	69	−2.3%
Postal Receipts (thous. of dol.)	450.8	821.3	82.2%	595.3	406.6	46.4%
Electric Customers (Residential)	48,256	49,494	2.6%	48,858	48,039	1.7%
Electric Customers (Commercial)	3,446	3,636	5.5%	3,606	3,425	5.3%
Natural Gas Customers (Residential)	50,407	51,590	2.3%	51,607	50,147	2.9%
Natural Gas Customers (Industrial)	53	55	3.8%	55	52	5.2%
Telephone Lines in Service (Mt. Bell)(Residential)	55,770	57,638	3.3%	56,671	55,124	2.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,577	12,188	5.3%	11,870	11,194	6.0%
Salt Lake County						
Non-Ag. Employment (thous.)	344.4r	361.9f	5.1%	351.7	338.5	3.9%
Unemployment Rate	4.0r	3.4	−15.0%	3.9	5.0	−21.0%
Auth. Permit Construction (thous. of dol.)	32,746.5	25,200.0	−23.0%	33,435.2	32,757.1	2.1%
New Dwelling Units (no.)	194	152	−21.6%	162	180	−10.1%
Postal Receipts (thous. of dol.)	8,548.7	8,240.3	−3.6%	8,197.0	7,931.3	3.3%
Electric Customers (Residential)	240,062	243,658	1.5%	242,740	239,152	1.5%
Electric Customers (Commercial)	20,438	20,935	2.4%	20,832	20,353	2.4%
Natural Gas Customers (Residential)	219,138	223,405	1.9%	224,060	220,212	1.7%
Natural Gas Customers (Industrial)	241	244	1.2%	241	236	2.3%
Telephone Lines in Service (Mt. Bell)(Residential)	231,655	237,769	2.6%	234,269	229,707	2.0%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,826	113,677	1.7%	112,554	110,769	1.6%
Utah County						
Non-Ag. Employment (thous.)	85.7r	88.7f	3.5%	84.3	80.3	5.1%
Unemployment Rate	4.0r	3.9	−2.5%	3.9	4.8	−20.0%
Auth. Permit Construction (thous. of dol.)	10,825.3	11,183.4	3.3%	12,651.7	10,311.1	22.7%
New Dwelling Units (no.)	88	106	20.5%	74	68	8.5%
Postal Receipts (thous. of dol.)	1,242.1	1,590.0	28.0%	1,393.8	1,130.3	23.3%
Electric Customers (Residential)	52,231	53,750	2.9%	53,088	52,147	1.8%
Electric Customers (Commercial)	6,057	6,260	3.4%	6,099	5,959	2.3%
Natural Gas Customers (Residential)	61,650	62,893	2.0%	62,884	61,554	2.2%
Natural Gas Customers (Industrial)	69	73	5.8%	73	68	8.0%
Telephone Lines in Service (Mt. Bell)(Residential)	65,750	67,154	2.1%	66,089	64,409	2.6%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	20,888	19,636	−6.0%	20,976	19,916	5.3%
Weber County						
Non-Ag. Employment (thous.)	62.1r	66.4f	6.9%	64.0	61.6	3.9%
Unemployment Rate	6.1r	5.2	−14.8%	5.0	6.5	−23.4%
Auth. Permit Construction (thous. of dol.)	7,090.0	6,324.5	−10.8%	5,516.0	5,799.7	−4.9%
New Dwelling Units (no.)	48	38	−20.8%	44	47	−6.2%
Postal Receipts (thous. of dol.)	660.2	694.2	5.1%	682.0	659.7	3.4%
Electric Customers (Residential)	53,480	54,333	1.6%	54,132	53,437	1.3%
Electric Customers (Commercial)	4,915	5,036	2.5%	5,001	4,924	1.6%
Natural Gas Customers (Residential)	49,379	50,130	1.5%	50,461	49,690	1.6%
Natural Gas Customers (Industrial)	86	85	−1.2%	84	83	1.3%
Telephone Lines in Service (Mt. Bell)(Residential)	46,764	47,752	2.1%	47,242	46,367	1.9%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,116	12,385	2.2%	12,206	11,742	4.0%

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

Utah Business Statistics

UTAH DATA	Nov. 1988	Nov. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	21,449	NA	NA	NA	20,473	NA
New Corporations (no.)	415	NA	NA	NA	454	NA
New Car, Truck, and Motor Home Sales (no.)	4,750	4,396	-7.5%	5,094	5,213	-2.3%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	68.20	72.70	6.6%	72.00	67.53	6.6%
Lambs (cwt)	62.30	53.30	-14.4%	61.57	64.29	-4.2%
Milk Wholesale (cwt)	12.60	14.40	14.3%	12.43	11.59	7.2%
Alfalfa Hay, Baled (per ton)	77.00	85.00	10.4%	84.08	75.00	12.1%
Cattle Slaughtered (live weight) (thous. of lbs.)	43,069	48,122	11.7%	48,281	46,469	3.9%
Construction						
Total Construction (thous. of dol.) 1	60,099.1	76,615.5	27.5%	76,668.7	NA	NA
Residential	28,436.3	33,037.9	16.2%	36,025.6	NA	NA
Nonresidential	23,271.5	24,083.0	3.5%	24,606.1	NA	NA
Additions, Alterations, and Conversions	8,391.3	19,494.6	132.3%	16,037.0	NA	NA
Total Permit Construction (thous. of dol.) 2	59,117.1	83,816.0	41.8%	81,629.5	70,500.0	15.8%
Residential	28,313.2	35,743.0	26.2%	37,049.1	34,427.5	7.6%
Nonresidential	21,999.3	32,674.0	48.5%	30,188.5	22,925.0	31.7%
Additions, Alterations, and Repairs	8,804.6	15,398.9	74.9%	14,391.8	13,147.5	9.5%
New Dwelling Units (no.)	388	428	10.3%	466	475	-1.9%
Employment						
Civilian Labor Force (thous.)	773.2	801.8	3.7%	781.7	757.3	3.2%
Total Employed Persons	744.3	773.5	3.9%	749.1	719.6	4.1%
Unemployed Persons	28.9	28.2	-2.4%	32.6	37.7	-13.5%
Percent Total Labor Force	3.7	3.5	-5.4%	4.2	5.0	-16.2%
Employees on Nonagricultural Payrolls (thous. of jobs)	678.4	711.0	4.8%	685.8	657.8	4.3%
Manufacturing	101.8	105.1	3.2%	102.6	98.4	4.3%
Mining	7.8	8.4	7.7%	8.0	8.2	-3.0%
Contract Construction	26.9	28.5	5.9%	25.7	25.0	2.9%
Transportation, Communication, and Utilities	40.6	42.1	3.7%	40.6	39.3	3.2%
Wholesale Trade	36.7	38.7	5.4%	37.5	35.3	6.1%
Retail Trade	126.4	133.9	5.9%	126.7	120.6	5.1%
Finance, Insurance, and Real Estate	33.0	33.1	0.3%	33.2	33.4	-0.6%
Services 3	158.8	171.3	7.9%	165.9	155.1	6.9%
Federal Government	39.1	40.1	2.6%	40.0	39.4	1.7%
State Government 4	40.2	42.0	4.5%	39.9	38.5	3.6%
Local Government 4	66.7	67.8	1.6%	65.9	64.7	1.8%
Average Weekly Hours						
Manufacturing	41.2	40.8	-1.0%	39.8	40.4	-1.3%
Mining	39.4	41.6	5.6%	40.8	42.2	-3.3%
Wholesale Trade	36.7	35.1	-4.4%	35.8	37.9	-5.6%
Retail Trade	27.8	26.9	-3.2%	27.2	28.0	-2.7%
Amount of Unemployment Compensation (thous. of dol.)	4,622.4	3,425.6	-25.9%	5,057.0	5,970.6	-15.3%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,376.9	2,133.5	-10.2%	2,211.7	2,345.4	-5.7%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	259,545.4	NA	NA	NA	146,489.8	NA
Sales and Use Tax	130,999.2	NA	NA	NA	53,142.6	NA
Motor Fuel Tax	10,856.8	NA	NA	NA	11,027.8	NA
Individual Income Tax	65,492.4	NA	NA	NA	52,536.4	NA
Corporation Franchise Tax	-122.7	NA	NA	NA	5,885.3	NA
Production						
Crude Oil to Refineries (thous. of bbls.)	4,400.2	NA	NA	NA	4,219.0	NA
Crude Oil (thous. of bbls.)	2,567.6	2,191.5	-14.6%	2,366.2	2,783.8	-15.0%
Natural Gas (mil. of cu. ft.)	23,883.8	22,845.0	-4.3%	22,947.2	23,066.9	-0.5%
Coal (thous. short tons)	1,441.0	1,932.0	34.1%	1,563.3	1,514.4	3.2%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	765,585	907,377	18.5%	980,991	864,979	13.4%
Highway Traffic Count Across State Lines	34,597	41,914	21.1%	38,116	NA	NA
Transient Room Taxes (thous. of dol.)	1,683.7	NA	NA	NA	548.9	NA
Visits, State, Nat'l. Parks, Monuments (thous.)	391.8	449.1	14.6%	1,109.9	1,104.2	0.5%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	493,200	507,397	2.9%	499,384	487,856	2.4%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	183,298	186,938	2.0%	185,595	180,583	2.8%
Electric Customers (Residential)	479,042	485,653	1.4%	NA	476,318	NA
Electric Customers (Commercial)	47,097	48,423	2.8%	NA	46,768	NA
Natural Gas Customers (Residential & Commercial)	460,145	NA	NA	NA	458,321	NA
Natural Gas Customers (Industrial)	558	NA	NA	NA	549	NA

Utah Business Statistics

UTAH DATA	Nov. 1988	Nov. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.6r	56.9f	4.2%	54.7	52.9	3.5%
Unemployment Rate	4.1r	4.0	-2.4%	3.9	4.8	-19.4%
Auth. Permit Construction (thous. of dol.)	7,442.6	7,457.5	0.2%	10,020.5	9,266.8	8.1%
New Dwelling Units (no.)	51	67	31.4%	69	68	0.6%
Postal Receipts (thous. of dol.)	463.3	662.8	43.1%	611.9	421.7	45.1%
Electric Customers (Residential)	48,101	49,357	2.6%	48,962	48,063	1.9%
Electric Customers (Commercial)	3,550	3,598	1.4%	3,610	3,445	4.8%
Natural Gas Customers (Residential)	50,728	52,073	2.7%	51,719	50,273	2.9%
Natural Gas Customers (Industrial)	53	55	3.8%	55	53	5.4%
Telephone Lines in Service (Mt. Bell)(Residential)	55,872	57,708	3.3%	56,824	55,238	2.9%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,577	12,296	6.2%	11,930	11,265	5.9%
Salt Lake County						
Non-Ag. Employment (thous.)	348.1r	367.3f	5.5%	353.1	339.3	4.1%
Unemployment Rate	3.9r	3.4	-12.8%	3.8	4.9	-21.3%
Auth. Permit Construction (thous. of dol.)	23,274.3	28,438.7	22.2%	33,865.6	30,194.8	12.2%
New Dwelling Units (no.)	140	139	-0.7%	162	179	-9.6%
Postal Receipts (thous. of dol.)	8,683.2	8,470.6	-2.4%	8,179.3	7,905.3	3.5%
Electric Customers (Residential)	241,208	244,266	1.3%	242,995	239,450	1.5%
Electric Customers (Commercial)	20,438	20,869	2.1%	20,868	20,376	2.4%
Natural Gas Customers (Residential)	220,377	225,658	2.4%	224,500	220,589	1.8%
Natural Gas Customers (Industrial)	238	245	2.9%	242	236	2.4%
Telephone Lines in Service (Mt. Bell)(Residential)	232,007	238,364	2.7%	234,799	229,998	2.1%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,620	113,935	2.1%	112,747	110,900	1.7%
Utah County						
Non-Ag. Employment (thous.)	86.3r	89.3f	3.5%	84.9	80.8	5.0%
Unemployment Rate	3.5r	3.7	5.7%	3.9	4.7	-17.8%
Auth. Permit Construction (thous. of dol.)	8,401.2	10,037.4	19.5%	12,788.1	10,335.5	23.7%
New Dwelling Units (no.)	41	55	34.1%	75	65	15.3%
Postal Receipts (thous. of dol.)	1,336.4	1,636.9	22.5%	1,418.8	1,164.8	21.8%
Electric Customers (Residential)	52,318	52,849	1.0%	53,133	52,224	1.7%
Electric Customers (Commercial)	6,055	6,397	5.6%	6,128	5,976	2.5%
Natural Gas Customers (Residential)	61,807	63,431	2.6%	63,020	61,652	2.2%
Natural Gas Customers (Industrial)	71	74	4.2%	74	68	8.1%
Telephone Lines in Service (Mt. Bell)(Residential)	65,906	67,202	2.0%	66,197	64,547	2.6%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	20,993	19,723	-6.0%	20,870	20,040	4.1%
Weber County						
Non-Ag. Employment (thous.)	63.3r	66.8f	5.5%	64.4	61.8	4.1%
Unemployment Rate	5.4r	5.1	-5.6%	4.9	6.4	-23.4%
Auth. Permit Construction (thous. of dol.)	4,426.1	11,198.7	153.0%	6,080.4	5,646.5	7.7%
New Dwelling Units (no.)	49	44	-10.2%	44	47	-7.4%
Postal Receipts (thous. of dol.)	694.9	702.7	1.1%	682.6	669.0	2.0%
Electric Customers (Residential)	53,621	54,421	1.5%	54,199	53,482	1.3%
Electric Customers (Commercial)	4,876	5,052	3.6%	5,015	4,924	1.9%
Natural Gas Customers (Residential)	49,534	50,737	2.4%	50,561	49,743	1.6%
Natural Gas Customers (Industrial)	86	84	-2.3%	84	83	1.0%
Telephone Lines in Service (Mt. Bell)(Residential)	46,822	47,803	2.1%	47,323	46,432	1.9%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,114	12,424	2.6%	12,232	11,811	3.6%

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	Nov. 1988	Nov. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,017.3	5,337.6	6.4%	5,206.7	4,851.3	7.3%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,168.9	4,543.9	9.0%	4,397.8	4,042.7	8.8%
Industrial Production Indexes (seasonally adjusted) (1977=100)	139.9	142.2	1.6%	141.5	136.7	3.6%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	442.1	485.5	9.8%	471.6	426.5	10.6%
Net Exports of Goods and Services (bil.) (qtly.)	−70.8	−41.2	−41.8%	−50.2	−77.3	−35.1%
Exports of Goods and Services (bil.) (qtly.)	579.7	641.0	10.6%	620.2	539.6	14.9%
Imports of Goods and Services (bil.) (qtly.)	650.5	682.2	4.9%	670.4	616.9	8.7%
Index of Leading Indicators (1982=100)	144.1	144.5	0.3%	144.9	142.3	1.8%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	120.3	125.9	4.7%	123.5	117.8	4.8%
CPI-U (All Urban Consumers) Food & Beverages	120.2	126.7	5.4%	124.3	117.7	5.6%
CPI-U (All Urban Consumers) Housing	119.9	124.5	3.8%	122.6	118.0	3.9%
CPI-U (All Urban Consumers) Transportation	110.7	115.0	3.9%	113.7	108.5	4.9%
CPI-U (All Urban Consumers) Medical Care	141.8	153.9	8.5%	148.2	137.9	7.5%
CPI-U (All Urban Consumers) Energy	88.9	93.2	4.8%	93.9	89.2	5.3%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	109.7	114.8	4.6%	113.1	107.6	5.1%
GNP Price Deflator (1982=100) (qtly.)	123.3	127.9	3.7%	125.9	120.9	4.2%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	122.5	124.5	1.6%	123.7	121.5	1.8%
Total Civilian Employment (mil.)	116.0	117.8	1.6%	117.2	114.8	2.1%
Unemployment Rate	5.3	5.3	0.0%	5.3	5.5	−5.0%
Construction						
Total Construction (mil. of dol.)	19,761.7	19,136.8	−3.2%	20,981.3	21,608.4	−2.9%
Residential	9,541.1	8,949.8	−6.2%	9,926.8	10,141.6	−2.1%
Nonresidential	7,325.5	6,777.8	−7.5%	7,284.7	7,546.0	−3.5%
Non-Building	2,895.1	3,409.2	17.8%	3,769.9	3,920.9	−3.9%
New Dwelling Units (no.)	109,279	93,144	−14.8%	112,330	121,773	−7.8%
Interest Rates						
Federal Funds Rate	8.35	8.55	2.4%	9.24	7.40	24.9%
Short Term (3-month Treasury bill rate)	7.68	7.65	−0.4%	8.15	6.48	25.8%
Long Term (30-year Treasury bond yields)	9.07	8.03	−11.5%	8.68	8.98	−3.3%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	10.05	10.50	4.5%	10.87	9.17	18.6%
Mortgage Rates (new homes)	9.05	9.78	8.1%	9.70	8.79	10.3%

Sources: *Business Conditions Digest*, U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Business Expenditures for New Plant Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Survey of Current Business, U.S. Department of Commerce: New Home Mortgage Rates.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

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REPORT ON WOMEN-OWNED BUSINESSES IN UTAH

James A. Wood, Rose Ann Watson, Research Analysts

Nationally the number of women-owned businesses has more than doubled in the 1980's. Are Utah women part of this entrepreneurial boom? In an effort to better understand the changing role of women-owned businesses in the Utah economy, the state's newly created Women's Business Development Office has recently published a report on women-owned businesses in Utah. This report was undertaken by the Bureau of Economic and Business Research, University of Utah. The objectives of the report were:

(1) The evaluation of existing state data resources and statistics on women-owned businesses.

(2) The identification of socio-economic barriers for women owners of business.

(3) The development of a profile of women owners of business based on survey responses and interviews.

(4) The analysis of the economic impacts of women-owned businesses on the Utah economy.

(5) The recommendation for state programs to assist women-owned businesses.

Statistics and Data Resources on Women-Owned Businesses

Currently, no data or statistics on women-owned businesses in Utah were available. The most recent data by the Bureau of the Census are 1982 figures that show 21,921 women-owned business firms (sole proprietorships, partnerships and Subchapter S Corporations.) These firms had $664 million in sales and receipts but paid only $74 million in payroll; less than 1 percent of wages and salaries in Utah in 1982. Only 1,684 of the women-owned businesses or 8 percent had paid employees. These data demonstrate the extent of "cottage industry" work among women-owned businesses using 1982 statistics.

The literature, statistics and research on women in the Utah economy has focused on the labor and demographic characteristics of all working women. The principal data resource is the study, *Hard at Work: Women in the Utah Labor Force*, Utah Department of Employment Security, authored by Lecia Parks Langston. This study examines demographics, labor force participation, occupations, earnings and income and child care for the female labor force.

No studies have been made that have examined women entrepreneurs separately from other working women. However, two directories related to women-owned businesses are available: (1) *Minority and Women-Owned Business Source Directory*, Utah Supplier Development Council and (2) *The Directory of Business and Professional Women of Utah 1987-1988*, edited by Vee Carlisle.

No attempt is made in either of these directories to discuss or analyze the characteristics of women-owned businesses. The directory of the Utah Supplier Development Council is considerably smaller than The Directory of Business and Professional Women; it includes information on only 112 women-owned businesses in Utah. The second directory has a listing of over 3,200 women, but many of them are managers or professional women (lawyers, doctors, etc.) rather than women owners of businesses.

Three national sources of data concerning women-owned businesses were used: the Small Business Administration, Bureau of the Census and the Internal Revenue Service. Unfortunately the most recently published data are for 1982-1983.

The Socio-Economic Barriers for Women Owners of Businesses

The case for policies and programs to assist women rests on considerations of equity and efficiency. Women have historically been at a disadvantage for many reasons—laws, religion, custom, culture, and prejudice. These disadvantages are gradually being reduced and eliminated, but women owners of businesses both nationally and in Utah continue to feel that in the business world they are at a disadvantage due to the following:

Education

Given women's education patterns (non-technical fields) women-owned businesses remain in retail and service areas, the least profitable and highest risk area for small business.

Occupations

Nationally nearly 70 percent of working women are clustered into the lowest paying occupations—clerical, service, sales, and unskilled factory jobs. These occupations provide little experience for running a business or developing entrepreneurial skills.

Capital and Credit

Due to occupational segregation and wage discrimination, employed women are much less likely to be in a position to build up capital. Also, women are less likely to have the hands-on business experience which many lenders require for credit risk. Nearly every woman-owner of business surveyed and interviewed emphasized the difficulty in "getting financing". The common refrain was, all small businesses face the obstacle of financing, but women are disproportionately affected because they are almost exclusively owners of small businesses. Furthermore, because small business loans are granted on a very subjective basis, women suffer from sex-role stereotyping and discrimination. "I could have never gotten the loan without my husband," or "my husband had to guarantee the loan," or "my husband had to co-sign the loan" were common observations.

Business Networks

The traditional business networks such as Rotary, Chambers of Commerce, etc., which serve as a source of contacts and influence have been male-dominated.

Children

In contemporary America, the greatest barrier to economic equality is children. Most women want to bear children and are concerned about their well-being once they are born. Whether this "maternal instinct" is primarily biological, or some complex interaction of biology and culture, is not critical for framing public policy.[1] The fact remains that the desire for children is present and places women at a disadvantage.

Survey and Interview Results

Seven hundred women-owned businesses were surveyed in November and December of 1989 to construct a business profile that will help develop effective assistance policies and programs. The survey sample was drawn from The Directory of Business and Professional Women of Utah 1987-1988. This directory was the only comprehensive list, but was less than an ideal source. First, the directory had only 700 names of women-owned businesses; 1982 Bureau of the Census data estimates over 21,000 women-owned businesses operate in Utah. Since the 700 women-owned businesses were not randomly selected, it is unlikely they are truly representative of women-owned businesses in Utah, i.e., there are some biases in the sample. Second, the directory is two years out-of-date. As anticipated many surveys (100) were "returned to sender" with no forwarding address, thus reducing the sample size to 600 women-owned businesses. The response rate for these remaining 600 women-owned businesses was 25 percent or 150 returned surveys.

The results of the survey were essential in developing a profile of women-owned businesses in Utah and the characteristics of the owner.

Business Profile

1. Ninety percent of the firms were either corporations (44%) or sole proprietorships (46%).
2. Seventy-eight percent of the firms had paid employees.
3. Firms with full-time employees had an average of five full-time employees.
4. Average sales revenue was $100,000.
5. Average net income was less than $30,000.
6. Initial financing for the business was from personal savings.
7. Major obstacles to success and growth were financing and finding qualified employees.
8. The firm had no assistance from state or federal agencies.
9. The firm was most likely in the service (43%) or retail trade (26%) sectors.

Owner Profile

1. Forty-six years old.
2. Married (65%).
3. Median household income of $45,000.
4. Three out of four had children.
5. Average number of children, 3.06.
6. College graduate (53%).
7. Immediate prior work experience—worked for small corporation.
8. Forty percent worked more than 50 hours a week.
9. Seventy-three percent started the business, 19 percent purchased it.
10. The average number of years of ownership was 10 years.

Detailed results of the survey appear at the end of this article.

Personal interviews were conducted with 12 women owners of business to elicit comments and impressions regarding four specific areas: (1) the personal characteristics deemed most responsible for success, (2) the experience of obtaining financing, (3) the qualifications and productivity of employees, (4) the use of state assistance programs and recommendations regarding the role of the state.

The firms and owners participating in the interviews are given below:

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[1] Fuchs, Victor J., "Women's Quest for Economic Equality," *Journal of Economic Perspectives*, Vol. 3, No. 1, Winter 1989.

Metropolitan Firms

1. Dick and Jane Clothing
   Gay Null
   Children's Clothes
2. Golden Braid Bookstore
   Jacqueline Pratt
   Books
3. La Frontera Cafe
   Viola Trovar
   Restaurant
4. Laura's Interior's
   Laura Jenkinson
   Interior Design
5. Meditech
   Jari Davis
   Medical Billing
6. Snow White Eggs Company
   Gail Mannos
   Food Distribution
7. Western Travel
   JoAnn Noorda
   Travel Agency
8. Wicker and Willow
   Jean Martin
   Furniture

Nonmetropolitan Firms

9. Designer Jeans
   Peggy Layton
   Catalog Clothes
   (Manti)
10. Personal Impressions
    Sharon Mangum
    Embroidery
    (Cedar City)
11. Solid Contractors, Inc.
    Judith Shafkind
    Building Contractor
    (Park City)
12. The Worm Lady
    Linda Gilbert
    Wholesale Bait
    (Roosevelt)

The most frequently mentioned personal characteristics for success were hard work and long hours, organizational ability and relationship with employees. A substantial majority of the women interviewed had very negative comments about their financing experience. More than one interviewee called it a "degrading" experience and many expressed frustration with the red tape and delays of the SBA loan programs. The common experience was a lack of confidence shown by the bank's loan officer because the applicant was a woman. Often the woman applicant needed her husband to co-sign on the loan and most of those interviewed said, "I could never have secured financing without my husband". Comments on employees focused on productivity and qualifications. Consequently many of the interviewees recommended the state develop training programs, including management training programs. Many also expressed an insecurity about accounting, finance and computers and encouraged training programs in these areas. Loan programs to assist women-owners of business were often mentioned along with recommendations for lower state taxes.

The Economic Impact of Women-Owned Businesses on the Utah Economy

The case for programs and policies to assist women-owned businesses rests primarily on issues of equity and efficiency rather than potential economic benefits to the state. In addition, efforts of the Women's Business Development Office will broaden and round out the economic development program for the State of Utah, particularly in light of the rapid rate at which women have been creating new businesses nationally; five times greater than the rate for men.

The issue is one of enhancing the job and income opportunities of women with policies and programs derived from arguments of equity and efficiency.

Equity

Women and the desire for children raises the issue of equity. For women the greatest barrier to economic equality is children. Furthermore the changing family structure due to divorce means women are more likely to be single and have an increased share of the financial responsibility for children. If the welfare of children is an important public good then the argument for policies to improve the economic well-being of women has merit. After all, the poverty rate among children is almost double the rate for adults—a situation without precedent in American history.

Although policies and programs for assisting women-owned businesses may not increase the total economic well-being of the state, they can certainly improve the economic well-being of women and this is particularly important in those cases where a women is a single head of household with children under 18 years old.

Efficiency

As discussed earlier, women historically have been at a disadvantage due to education, occupations, discrimination by lenders, and exclusion from business networks. Discrimination causes economic distortions which result in lower output for the economy. Reducing discrimination through assistance programs for women owners of business will therefore, increase the overall economic efficiency of the Utah economy.

Expand State Economic Development Program

In 1982 the Bureau of the Census data showed there were over 20,000 women owners of businesses in Utah operating as sole proprietors with no paid employees. These sole proprietors are part of Utah's "cottage industries"; and efforts to accelerate the growth of these established firms and move them from "doing business in the basement" to operations with full-time and/or part-time employees, would increase job and income opportunities for women. If only 10 percent of the 20,000 women-owned sole proprietorships added one job as a result of educational and training assistance programs, the employment of women-owned businesses would increase by 2,000 jobs.

Recommendations and Role of the State

The primary role of the State should be in providing and facilitating educational and information services for women-owned businesses.

Education

The Women's Business Development Office could facilitate the education services provided by existing agencies (Small Business Development Center, SBA, Employment Security, Colleges and Universities), mentor programs and business networks (conferences and seminars). Educational services should include assistance in management, finance, accounting, marketing, and computer skills.

Information

The effectiveness of programs and policies will depend, in part, on an understanding of the characteristics of women-owned businesses provided by surveys conducted through the Women's Business Development Office. These surveys will lead to the development of a current directory of women-owned businesses which is an essential tool for the dissemination of information regarding educational services and programs.

Although there were many comments in favor of developing special lending programs for women-owned businesses these programs should be undertaken primarily as privately operated and funded programs. The principal reason is one of efficiency. Providing financing to businesses should be kept in the private sector, where it is subject to the rigors and discipline of competition and market forces, rather than the public sector where lending practices would be vulnerable to favoritism and inefficiencies.

A model could be the WEDCO program in Minnesota which "operates a business development and financial management assistance program as well as various loan funds" for women who are either establishing a new business or operating an existing business. WEDCO, a private corporation, operates a $1.2 million loan fund for the start-up and expansion of women-owned businesses including direct and guarantee loans, lines of credit and other forms of borrowing.

SURVEY RESULTS OF WOMEN-OWNED BUSINESSES

Characteristics of Firms

Industrial Classification:

	Number	Percent
Agriculture	2	1
Construction	5	3
Finance, Insurance, Real Estate	13	9
Manufacturing	14	9
Retail	38	25
Service	64	43
Transportation	9	6
Wholesale	5	3

Type of Business:

Corporation

Number	65
Percent	43.3

Sole Proprietorship

Number	68
Percent	45.3

Partnership

Number	17
Percent	11.3

If Corporation:

Percent with controlling interest:

Yes	82.5%
No	17.5%

If Partner:

Percent whose partner is related:

Yes	70%
No	30%

Employment:

Firm's owner operated with no paid employees

Number	33

Firms with both full-time and part-time paid employees

Number	61
Total Employees	782
Average full-time	6.08
Average part-time	6.74

Firms with only full-time employees

Number	28
Total	633
Total w/out J. Morris[1]	133
Average w/out J. Morris[1]	4.75

Firms with only part-time employees

Number	28
Total	88
Average	3.14

Sales Revenue:

14.7%	less than $9,999
14%	10,000 to 49,000
11%	50,000 to 99,000
16.9%	100,000 to 249,000
16.2%	250,000 to 499,000
11.8%	500,000 to 999,000
15.4%	over 1,000,000

Net Income:

38.6%	less than $9,999
40.2%	10,000 to 49,000
12.9%	50,000 to 99,999
3.79%	100,000 to 249,000
1.52%	250,000 to 499,000
1.52%	500,000 to 999,000
1.52%	over 1,000,000

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[1] J. Morris of Morris Travel employs 500 persons.

Characteristics of Owner:

Age:

Average	Youngest	Oldest
45.9	28	82

Marital Status:

	Married	Never Married	Separated
Number	96	14	4
Percent	65.3	9.52	2.72

	Divorced	Widowed
Number	28	5
Percent	19	3.4

Household Income:

	$25,000 or less	$25,001 to $50,000
Number	21	66
Percent	14.7	46.2

	$50,001 to 100,000	Over 100,000
Number	36	20
Percent	25.2	14

Number of Children:

120 with children
30 without children
Average 3.06

Education:

High School

Yes	No
148	1
99%	1%

College Graduate

Yes	No
75	66
53%	47%

Graduate School
39%

Source of Financing:[2]

67%	Personal Savings
15%	Family/Relative
3%	Friends
7%	SBA Guarantee or Loan Program
1%	Other Government Programs
2.8%	Financial Institution
1.5%	Other

Difficulties:[2]

38%	Obtaining Finance Capital
19%	Management Experience
27%	Employee Productivity
33%	Other
33%	Availability of Qualified Employees
34%	Government Regulations

Federal	State	Local
81%	70%	81%

State Agencies Used:[2]

3%	Department of Community and Economic Development
0%	IMPACT: Minority Business Program
1%	Utah Innovation Center
14%	Utah Small Business Development Center
0%	Utah Technology Finance Corporation
5%	Department of Employment Security Employee Training Program
75%	None
7%	Other

Recommended Programs:[2]

33%	Loan Program
28%	Management Training Programs
12%	Employee Training Programs
8%	Existing Government Programs Sufficient
29%	No Opinion
13%	Other

[2] Total exceeds 100% due to multiple responses.

Work Experience:[2]

21%	Worked for large corporation (more than 500 employees)
40%	Worked for small corporation (less than 500 employees)
20%	Worked for public sector non-profit
22%	Worked for the business I now own
10%	Owned another business
3%	Did not work
15%	Other

Hours a Week:

17.9%	30 hours or less
27.9%	51 to 60 hours
17.1%	31 to 40 hours
10%	61 to 80 hours
25.7%	41 to 50 hours
1.43%	More than 80 hours

Ownership:

73%	Started business myself
5%	Took over family business
19%	Purchased business
3%	Bought franchise
2%	Other

Number of Years Business Owned
Average 9.7 years

Age of Business
Average 11.7 years

Figure 1
Percent Distribution of Women-Owned Businesses in Utah by Industry Sector

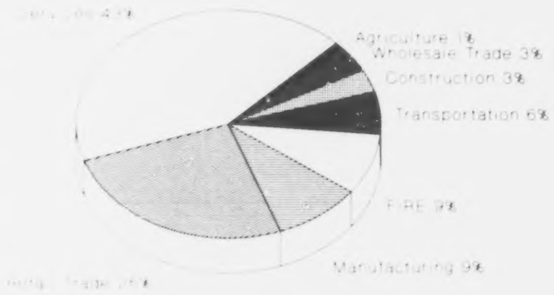
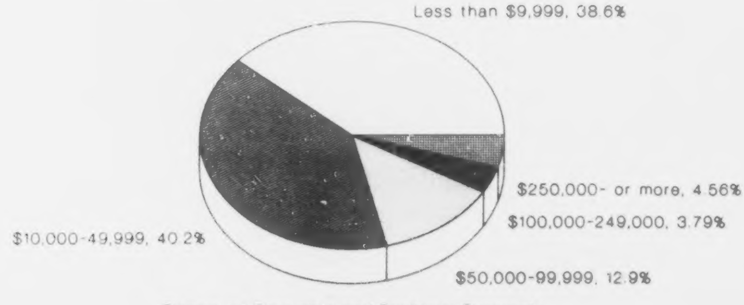


Figure 2
Percent Distribution of Net Income of Women-Owned Businesses in Utah



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[2] Total exceeds 100% due to multiple responses.

Figure 3
Sources of Financing for Women-Owned Businesses in Utah (Percent)

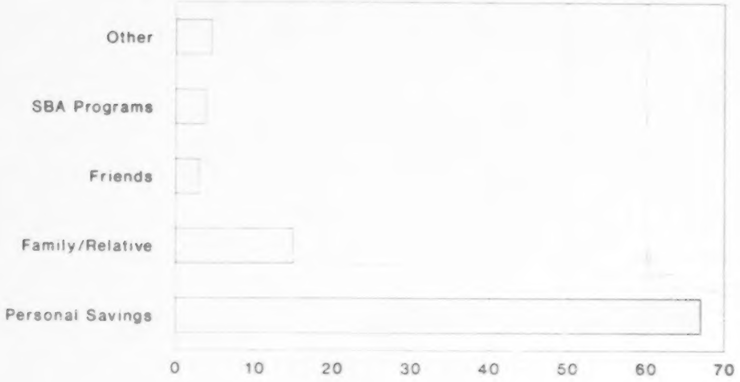
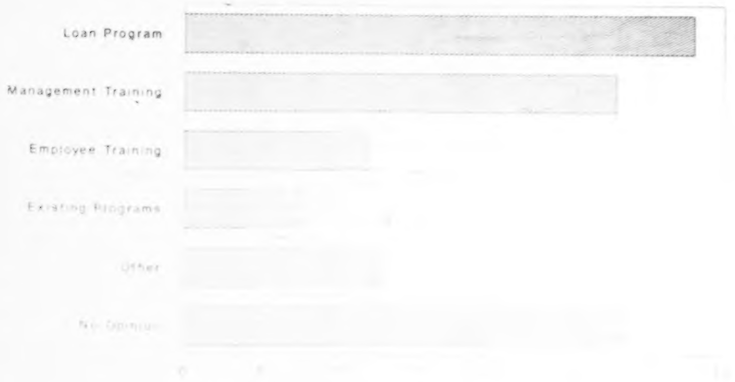
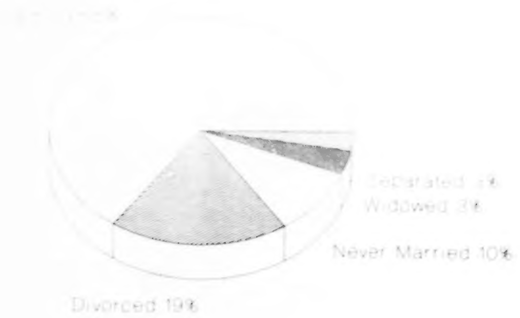


Figure 4
Recommended Programs to Assist Women-Owned Businesses in Utah (Percent)



Bureau of Economic and Business Research
Total exceeds 100 percent due to
multiple responses.

Figure 5
Marital Status of Women Owners of Businesses in Utah (Percent)



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January, 1990

Utah Business Statistics

UTAH DATA	Dec. 1988	Dec. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	21,449	NA	NA	NA	20,605	NA
New Corporations (no.)	501	522	4.2%	465	462	0.6%
New Car, Truck, and Motor Home Sales (no.)	4,572	4,177	-8.6%	5,061	5,222	-3.1%
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	69.40	74.90	7.9%	72.46	68.00	6.6%
Lambs (cwt)	63.30	55.00	-13.1%	60.88	63.81	-4.6%
Milk Wholesale (cwt)	13.00	15.00	15.4%	12.59	11.65	8.1%
Alfalfa Hay, Baled (per ton)	77.00	85.00	10.4%	84.75	75.58	12.1%
Cattle Slaughtered (live weight) (thous. of lbs.)	48,234	44,789	-7.1%	47,994	46,587	3.0%
Construction						
Total Construction (thous. of dol.) 1	51,098.6	90,293.0	76.7%	79,934.9	NA	NA
Residential	21,319.4	23,182.0	8.7%	36,180.8	NA	NA
Nonresidential	16,790.5	49,549.0	195.1%	27,336.0	NA	NA
Additions, Alterations, and Conversions	12,988.7	17,562.0	35.2%	16,418.1	NA	NA
Total Permit Construction (thous. of dol.) 2	54,173.9	83,128.5	53.4%	84,042.3	70,545.8	19.1%
Residential	21,474.8	24,707.2	15.1%	37,318.4	34,416.5	8.4%
Nonresidential	20,894.9	48,235.1	130.8%	32,466.9	22,671.3	43.2%
Additions, Alterations, and Repairs	11,804.2	10,186.2	-13.7%	14,257.0	13,458.0	5.9%
New Dwelling Units (no.)	285	328	15.1%	469	475	-1.1%
Employment						
Civilian Labor Force (thous.)	779.9	809.8	3.8%	784.2	759.0	3.3%
Total Employed Persons	752.1	778.7	3.5%	751.3	722.0	4.1%
Unemployed Persons	22.9	31.1	35.8%	32.9	36.6	-10.1%
Percent Total Labor Force	3.6	3.8	5.6%	4.2	4.9	-14.2%
Employees on Nonagricultural Payrolls (thous. of jobs)	682.6	713.6	4.5%	688.4	660.0	4.3%
Manufacturing	102.1	103.9	1.8%	102.7	98.9	3.9%
Mining	7.8	8.4	7.7%	8.0	8.2	-2.0%
Contract Construction	25.5	26.8	5.1%	25.8	25.0	3.2%
Transportation, Communication, and Utilities	40.7	43.2	6.1%	40.7	39.4	3.2%
Wholesale Trade	37.1	39.7	7.0%	37.7	35.5	6.3%
Retail Trade	129.4	136.9	5.8%	127.4	121.0	5.2%
Finance, Insurance, and Real Estate	33.3	33.8	1.5%	33.2	33.3	-0.3%
Services 3	161.9	172.8	6.7%	166.7	155.9	6.9%
Federal Government	39.5	39.9	1.0%	40.1	39.4	1.9%
State Government 4	38.8	41.1	5.9%	40.1	38.6	3.9%
Local Government 4	66.5	67.1	0.9%	65.9	64.8	1.7%
Average Weekly Hours						
Manufacturing	41.0	40.7	-0.7%	39.8	40.4	-1.4%
Mining	40.0	41.3	3.2%	40.9	41.8	-2.0%
Wholesale Trade	36.8	36.1	-1.9%	35.8	37.8	-5.3%
Retail Trade	27.8	28.1	1.1%	27.2	27.9	-2.4%
Amount of Unemployment Compensation (thous. of dol.)	5,108.2	5,704.1	11.7%	5,106.7	5,814.8	-12.2%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,343.8	2,117.8	-9.6%	2,192.8	2,335.3	-6.1%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	90,757.0	94,950.6	4.6%	158,011.4	147,034.4	7.5%
Sales and Use Tax	3,441.7	3,236.2	-6.0%	56,794.0	53,328.3	6.5%
Motor Fuel Tax	11,413.1	9,232.4	-19.1%	11,515.9	10,876.4	5.9%
Individual Income Tax	48,256.4	63,444.8	31.5%	52,969.7	52,883.8	0.2%
Corporation Franchise Tax	15,149.3	493.4	-96.7%	5,371.1	6,655.0	-19.3%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,637.1	NA	NA	NA	4,268.0	NA
Crude Oil (thous. of bbls.)	2,554.8	2,408.7	-5.7%	2,354.0	2,756.3	-14.6%
Natural Gas (mil. of cu. ft.)	24,932.4	26,101.9	4.7%	23,044.7	23,124.0	-0.3%
Coal (thous. short tons)	1,453.0	1,946.0	33.9%	1,604.4	1,507.0	6.5%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	882,695	999,132	13.2%	990,694	867,322	14.2%
Highway Traffic Count Across State Lines	33,030	41,914	26.9%	38,856	NA	NA
Transient Room Taxes (thous. of dol.)	-266.4	-253.5	-4.8%	557.0	621.5	-10.4%
Visits, State, Nat'l. Parks, Monuments (thous.)	261.7	282.6	8.0%	1,111.6	1,103.6	0.7%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	494,417	509,086	3.0%	500,607	488,597	2.5%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	183,697	187,570	2.1%	185,918	181,030	2.7%
Electric Customers (Residential)	481,839	488,185	1.3%	484,158	476,717	1.6%
Electric Customers (Commercial)	47,267	48,733	3.1%	48,158	46,827	2.8%
Natural Gas Customers (Residential & Commercial)	466,151	480,735	3.1%	473,242	459,251	3.0%
Natural Gas Customers (Industrial)	558	565	1.3%	565	549	2.8%

Utah Business Statistics

UTAH DATA	Dec. 1988	Dec. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.4r	57.5f	5.7%	55.0	53.0	3.7%
Unemployment Rate	3.6r	4.4	22.2%	4.0	4.7	-14.8%
Auth. Permit Construction (thous. of dol.)	4,719.1	5,543.9	17.5%	10,089.3	9,203.6	9.6%
New Dwelling Units (no.)	48	29	-39.6%	67	68	-2.0%
Postal Receipts (thous. of dol.)	590.9	681.3	15.3%	619.5	424.9	45.8%
Electric Customers (Residential)	48,382	49,581	2.5%	49,062	48,095	2.0%
Electric Customers (Commercial)	3,538	3,647	3.1%	3,620	3,462	4.5%
Natural Gas Customers (Residential)	51,132	52,323	2.3%	51,818	50,399	2.8%
Natural Gas Customers (Industrial)	54	55	1.9%	55	53	5.2%
Telephone Lines in Service (Mt. Bell)(Residential)	55,950	57,734	3.2%	56,973	55,347	2.9%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,620	12,254	5.5%	11,983	11,333	5.7%
Salt Lake County						
Non-Ag. Employment (thous.)	351.4r	368.8f	5.0%	354.6	340.2	4.2%
Unemployment Rate	3.4r	3.6	5.9%	3.9	4.7	-17.6%
Auth. Permit Construction (thous. of dol.)	19,916.5	53,385.7	168.0%	36,654.7	29,744.3	23.2%
New Dwelling Units (no.)	98	126	28.6%	164	178	-7.9%
Postal Receipts (thous. of dol.)	8,825.8	8,989.8	1.9%	8,193.0	7,973.3	2.8%
Electric Customers (Residential)	242,571	245,500	1.2%	243,239	239,738	1.5%
Electric Customers (Commercial)	20,605	21,061	2.2%	20,906	20,399	2.5%
Natural Gas Customers (Residential)	223,080	226,484	1.5%	224,784	220,869	1.8%
Natural Gas Customers (Industrial)	238	246	3.4%	243	237	2.5%
Telephone Lines in Service (Mt. Bell)(Residential)	232,565	239,112	2.8%	235,345	230,288	2.2%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,791	114,181	2.1%	112,946	111,015	1.7%
Utah County						
Non-Ag. Employment (thous.)	86.1r	89.3f	3.7%	85.3	81.4	4.8%
Unemployment Rate	3.8r	4.6	21.1%	3.9	4.6	-14.3%
Auth. Permit Construction (thous. of dol.)	12,154.4	9,165.9	-24.6%	12,539.0	10,622.8	18.0%
New Dwelling Units (no.)	47	41	-12.8%	74	67	11.4%
Postal Receipts (thous. of dol.)	1,629.1	1,826.2	12.1%	1,435.2	1,194.5	20.2%
Electric Customers (Residential)	52,609	53,509	1.7%	53,208	52,305	1.7%
Electric Customers (Commercial)	5,947	6,398	7.6%	6,165	5,978	3.1%
Natural Gas Customers (Residential)	62,564	63,895	2.1%	63,131	61,755	2.2%
Natural Gas Customers (Industrial)	71	74	4.2%	74	68	8.2%
Telephone Lines in Service (Mt. Bell)(Residential)	65,985	67,398	2.1%	66,315	64,681	2.5%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	21,018	19,790	-5.8%	20,768	20,161	3.0%
Weber County						
Non-Ag. Employment (thous.)	63.5r	66.2f	4.3%	64.6	62.1	4.1%
Unemployment Rate	4.6r	5.5	19.6%	5.0	6.2	-19.2%
Auth. Permit Construction (thous. of dol.)	3,377.9	5,551.2	64.3%	6,261.5	5,452.1	14.8%
New Dwelling Units (no.)	28	53	89.3%	46	46	0.2%
Postal Receipts (thous. of dol.)	880.0	925.5	5.2%	686.4	671.4	2.2%
Electric Customers (Residential)	53,914	54,636	1.3%	54,259	53,522	1.4%
Electric Customers (Commercial)	4,870	5,074	4.2%	5,032	4,919	2.3%
Natural Gas Customers (Residential)	50,377	50,991	1.2%	50,613	49,814	1.6%
Natural Gas Customers (Industrial)	86	83	-3.5%	84	84	0.6%
Telephone Lines in Service (Mt. Bell)(Residential)	46,877	47,910	2.2%	47,409	46,497	2.0%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,139	12,512	3.1%	12,263	11,876	3.3%

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

Bureau of Economic and
Business Research
University of Utah
Salt Lake City, Utah 84112
Return Postage Guaranteed
(Non-Profit Organization)

Non-Profit Org.
U.S. Postage Paid

Permit No. 1529
Salt Lake City, Utah

NATIONAL DATA	Dec. 1988	Dec. 1989	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,017.3	5,337.6	6.4%	5,233.4	4,880.6	7.2%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,206.3	4,566.6	8.6%	4,427.9	4,064.5	8.9%
Industrial Production Indexes (seasonally adjusted) (1977=100)	140.4	142.5	1.5%	141.7	137.2	3.3%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	442.1	485.5	9.8%	475.2	429.6	10.6%
Net Exports of Goods and Services (bil.) (qtly.)	-70.8	-41.2	-41.8%	-47.7	-73.7	-35.2%
Exports of Goods and Services (bil.) (qtly.)	579.7	641.0	10.6%	625.3	547.7	14.2%
Imports of Goods and Services (bil.) (qtly.)	650.5	682.2	4.9%	673.0	621.3	8.3%
Index of Leading Indicators (1982=100)	145.1	145.3	0.1%	144.9	142.8	1.5%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	120.5	126.1	4.6%	124.0	118.3	4.8%
CPI-U (All Urban Consumers) Food & Beverages	120.6	127.2	5.5%	124.9	118.2	5.7%
CPI-U (All Urban Consumers) Housing	120.2	124.9	3.9%	123.0	118.4	3.9%
CPI-U (All Urban Consumers) Transportation	110.8	115.2	4.0%	114.1	108.7	4.9%
CPI-U (All Urban Consumers) Medical Care	142.3	154.4	8.5%	149.3	138.6	7.7%
CPI-U (All Urban Consumers) Energy	88.7	93.2	5.1%	94.3	89.3	5.7%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	110.0	115.3	4.8%	113.5	108.0	5.1%
GNP Price Deflator (1982=100) (qtly.)	123.3	127.9	3.7%	126.3	121.3	4.2%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	122.7	124.5	1.5%	123.8	121.7	1.8%
Total Civilian Employment (mil.)	116.1	117.9	1.6%	117.3	115.0	2.1%
Unemployment Rate	5.3	5.3	0.0%	5.3	5.5	-4.2%
Construction						
Total Construction (mil. of dol.)	19,197.9	16,629.1	-13.4%	20,864.8	21,606.3	-3.4%
Residential	9,006.8	7,262.3	-19.4%	9,790.5	10,165.8	-3.7%
Nonresidential	6,726.1	6,166.9	-8.3%	7,307.9	7,509.9	-2.7%
Non-Building	3,465.0	3,199.9	-7.7%	3,766.4	3,930.7	-4.2%
New Dwelling Units (no.)	105,693	81,302	-23.1%	110,411	122,416	-9.8%
Interest Rates						
Federal Funds Rate	8.76	8.45	-3.5%	9.22	7.57	21.8%
Short Term (3-month Treasury bill rate)	8.09	7.64	-5.6%	8.12	6.67	21.6%
Long Term (30-year Treasury bond yields)	9.13	8.02	-12.2%	8.59	8.98	-4.3%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	10.50	10.50	0.0%	10.87	9.32	16.7%
Mortgage Rates (new homes)	9.04	9.70	7.3%	9.76	8.81	10.7%

Sources: *Business Conditions Digest*, U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Business Expenditures for New Plant Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Survey of Current Business, U.S. Department of Commerce: New Home Mortgage Rates.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

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Utah's Economy Continues to Grow in 1989

Austin Sargent, Research Analyst
Cindy Lewis, Research Assistant

In 1989 Utah experienced substantial growth in employment, gross taxable sales, and construction valuation. Population was up 1.2 percent and wages and property tax collections also improved over 1988. In 1989, 30,000 new nonagricultural jobs were created compared to 20,000 in 1988 and just 6,000 in 1987. And, despite a slight decrease in the number of new dwelling units, value of total construction was up 19.1 percent.

Gross taxable sales increased in all but two counties, Millard and Beaver, and total personal income and per capita income both increased in 1989. Total personal income in the state was up 8 percent and per capita personal income increased 6.4 percent to $12,967. Per capita personal income was highest in the Wasatch Front district and lowest in the Central district. The Wasatch Front was the only multi-county district where per capita income was above the state average of $12,967. Per capita income by multi-county district is shown in Figure 1.

Nearly all of Utah's counties showed improvement in 1989. The Wasatch Front, Mountainland, Southwestern, and Bear River planning districts all experienced strong economic growth. And, although the Uintah Basin, Southeastern, and Central districts continued to struggle in 1989, these counties are beginning to show improvement over previous years. In the past, the economies of many of the rural areas of the state have relied heavily on energy-related resources, and decreased demand for these resources in recent years has hurt the economies of these regions. Due to this decreased demand, rural counties have begun to restructure their economies to rely less on these natural resources and more on different industries. As a result, the economies of many depressed areas of the state are slowly beginning to improve.

Table 1 contains a summary of the percent change in the major economic indicators from 1988 to 1989 for Utah's counties and multi-county districts. Seventeen

Table 1

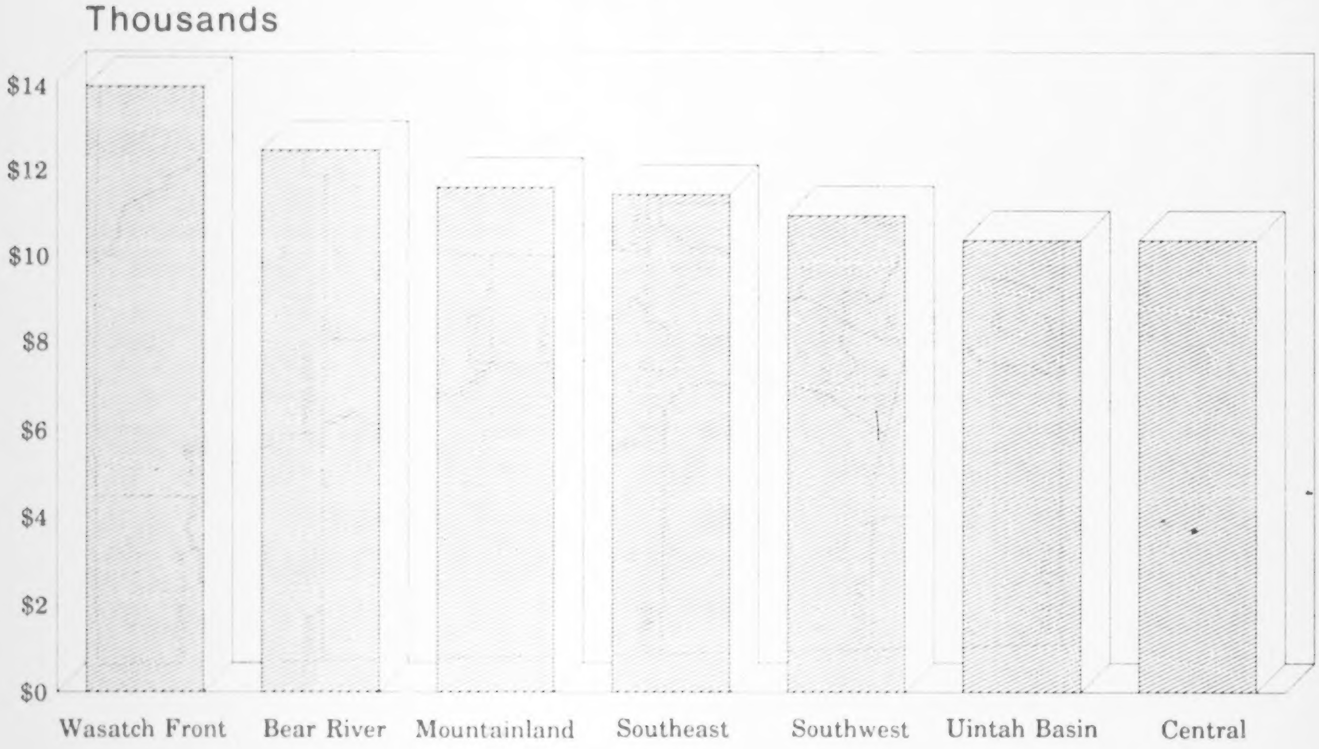
1989 Population and Six Other Economic Indicators

Percent Change by County and Multi-County District

	Population							
	1989 Estimate	Percent Change 1988-89	Average Monthly Nonag. Employment	Average Monthly Nonag. Wage	Property Taxes Charged	Gross Taxable Sales	Number of New Dwelling Units	Value of Total Construction
Bear River	**111,950**	**1.4**	**6.1**	**0.9**	**4.3**	**8.1**	**-11.2**	**0.6**
Box Elder	38,400	1.1	1.7	2.0	4.9	5.2	-35.4	5.2
Cache	71,700	1.6	8.9	0.6	4.5	8.9	3.8	-1.4
Rich	1,850	0.0	4.3	-1.7	-2.2	63.3	--	--
Central	**55,250**	**0.7**	**3.4**	**9.1**	**40.1**	**-20.4**	**-25.3**	**2.7**
Juab	5,800	1.8	4.9	5.1	7.9	10.6	-84.6	11.5
Millard	13,000	0.8	2.0	2.2	73.8	-61.3	-50.0	-31.5
Piute	1,550	0.0	1.7	-3.4	21.3	36.3	0.0	-68.4
Sanpete	16,800	0.6	4.0	0.5	-8.4	7.4	3.2	0.5
Sevier	16,000	0.6	2.8	6.3	-0.3	22.4	0.0	51.4
Wayne	2,100	0.0	9.7	-13.7	11.6	35.7	-100.0	-50.5
Mountainland	**291,000**	**2.0**	**7.0**	**3.3**	**3.0**	**13.4**	**14.3**	**27.9**
Summit	14,000	4.5	8.8	1.7	8.2	13.9	33.1	61.7
Utah	267,000	1.9	7.0	3.6	0.3	13.4	11.4	18.0
Wasatch	10,000	2.0	3.3	-5.9	11.3	11.9	-40.0	75.4
Southeastern	**52,300**	**-0.9**	**5.3**	**0.8**	**-0.8**	**13.0**	**-37.1**	**15.3**
Carbon	21,500	-2.3	3.0	0.2	-1.1	11.9	-65.0	18.7
Emery	11,300	0.0	6.0	6.5	-0.6	7.4	0.0	-50.2
Grand	6,500	-0.8	9.3	-6.3	-4.7	8.4	-55.6	1.0
San Juan	13,000	0.8	7.4	-2.5	1.1	29.6	166.7	133.5
Southwestern	**78,400**	**3.2**	**9.5**	**3.8**	**4.1**	**12.8**	**-0.2**	**11.4**
Beaver	4,800	0.0	-0.5	5.2	-4.7	-1.1	373.0	82.9
Garfield	4,100	1.2	8.9	0.2	-10.1	8.5	-68.4	-11.0
Iron	19,500	1.6	13.9	6.6	0.9	10.0	185.3	15.0
Kane	4,900	0.0	5.0	0.9	11.3	14.1	-75.4	7.2
Washington	45,100	4.9	11.5	2.9	8.1	15.5	-2.2	12.4
Uintah Basin	**34,450**	**-2.4**	**-0.3**	**1.1**	**0.2**	**3.2**	**-16.0**	**-14.1**
Daggett	650	-7.1	5.0	-1.4	10.3	34.0	--	-42.2
Duchesne	12,800	-2.3	1.3	2.8	3.3	7.9	-27.8	10.4
Uintah	21,000	-2.3	-1.4	0.5	-2.0	0.1	14.3	-45.3
Wasatch Front	**1,091,650**	**1.0**	**4.1**	**2.5**	**-0.2**	**5.7**	**-4.6**	**19.7**
Davis	187,000	1.6	7.0	3.1	3.8	9.8	-2.0	9.6
Morgan	5,850	2.6	5.1	-5.5	3.7	24.2	10.0	-51.2
Salt Lake	712,000	1.0	3.7	2.5	-1.8	5.4	-7.9	23.2
Tooele	27,800	0.0	5.7	-0.5	3.1	0.3	22.7	83.8
Weber	159,000	0.6	2.9	2.1	5.3	4.2	0.2	14.8
State Total	**1,715,000**	**1.2**	**4.7**	**2.3**	**1.9**	**6.7**	**-1.5**	**19.1**

Source: Selected Business Statistics for Utah Counties.

Figure 1
Per Capita Income by Multi-County District
1989



Utah Department of Employment Security

indicators are grouped into six major categories: Population, Labor Market and Income Data, Tax Data, Construction Activity, and two miscellaneous items -- New Car and Truck Registrations by Owner's County and "Payments in Lieu of Taxes Act" made to states under provisions of federal Public Law. More detailed economic information can be found in the tables that follow.

Population

In 1989 Utah's population was estimated at 1,715,000, a 1.2 percent increase over the 1988 figure of 1,695,000. Washington and Summit counties showed the highest percentage increases in population with rates of 4.9 percent and 4.5 percent respectively. Wasatch and Morgan counties both increased by 2 percent or more. Five counties showed population decreases, with Carbon, Daggett, Duchesne and Uintah counties all decreasing more than 2 percent. Daggett county lost 7.1 percent of its population between 1988 and 1989. (More detailed information about the population of Utah and its counties can be found in the January/February 1990 issue of the *Utah Economic and Business Review*.)

Employment and Wages

Average monthly nonagricultural employment and wages both showed a healthy improvement in 1989 over 1988 figures. Employment in Utah increased 4.7 percent from 660,075 in 1988 to 691,230 in 1989--the largest rate of increase since 1984. Average monthly nonagricultural wages also rose from $1,549 in 1988 to $1,585 in 1989, a 2.3 percent increase. Average monthly nonagricultural wages were highest in Emery ($2,205) and Box Elder ($2,156) counties and lowest in Wayne ($955) and Rich ($927) counties. Increased economic activity and job growth were the major reasons for these improvements. Iron county had the largest increase in both nonagricultural employment and wages with a 13.9 percent increase in average

Figure 2
Average Monthly Nonagricultural Employment
Percent Change, 1988-1989

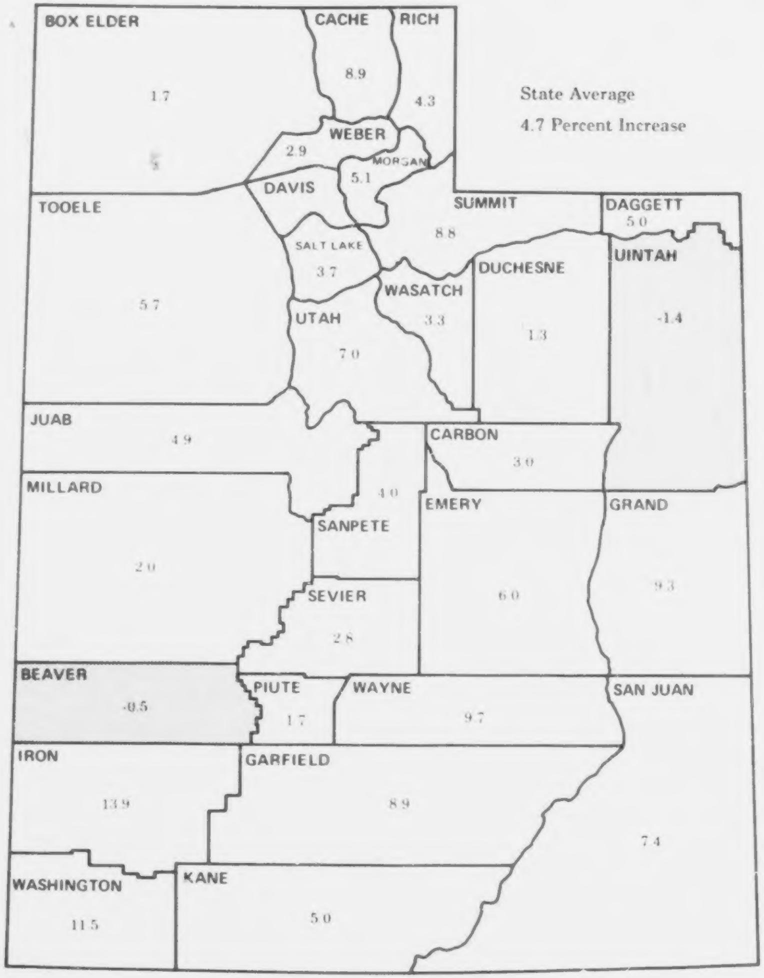
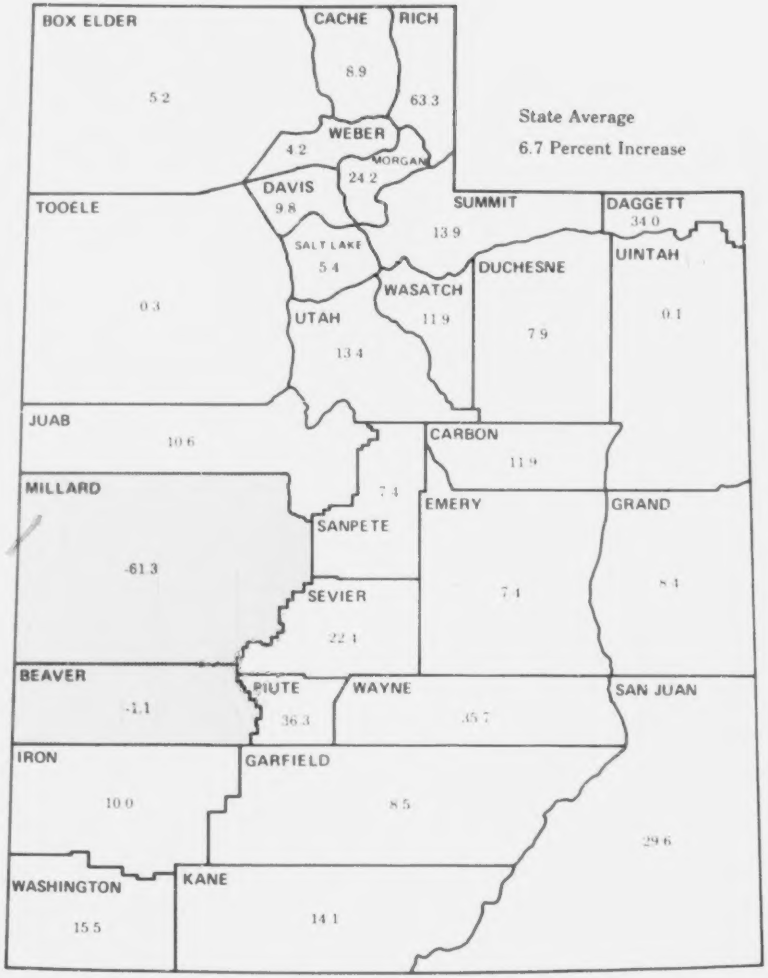

BOX ELDER 1.7
CACHE 8.9
RICH 4.3
State Average
4.7 Percent Increase
WEBER 2.9
MORGAN 5.1
DAVIS
TOOELE 5.7
SUMMIT 8.8
DAGGETT 5.0
SALT LAKE 3.7
UINTAH -1.4
DUCHESNE 1.3
WASATCH 3.3
UTAH 7.0
JUAB 4.9
CARBON 3.0
MILLARD 2.0
SANPETE 4.0
EMERY 6.0
GRAND 9.3
SEVIER 2.8
BEAVER -0.5
PIUTE 1.7
WAYNE 9.7
SAN JUAN 7.4
IRON 13.9
GARFIELD 8.9
WASHINGTON 11.5
KANE 5.0

Figure 3
Gross Taxable Sales
Percent Change, 1988-89


BOX ELDER 5.2
CACHE 8.9
RICH 63.3
State Average
6.7 Percent Increase
WEBER 4.2
MORGAN 24.2
DAVIS 9.8
TOOELE 0.3
SUMMIT 13.9
DAGGETT 34.0
SALT LAKE 5.4
UINTAH 0.1
DUCHESNE 7.9
WASATCH 11.9
UTAH 13.4
JUAB 10.6
CARBON 11.9
MILLARD -61.3
SANPETE 7.4
EMERY 7.4
GRAND 8.4
SEVIER 22.4
BEAVER -1.1
PIUTE 36.3
WAYNE 35.7
SAN JUAN 29.6
IRON 10.0
GARFIELD 8.5
WASHINGTON 15.5
KANE 14.1

monthly employment and a 6.6 increase in the average monthly nonagricultural wage. Much of the reason for these increases was increased construction activity in Iron county. Emery county also had a 6.5 percent increase in nonagricultural wages, one of the highest increases in the state during 1989, due mainly to increased mining activity.

Nonagricultural employment decreased by 1.4 percent in Uintah county and 0.5 percent in Beaver county. Average monthly nonagricultural wages decreased in nine counties with Wayne county showing the most dramatic decrease (13.7 percent). Percent change in average monthly nonagricultural employment by county appears in Figure 2.

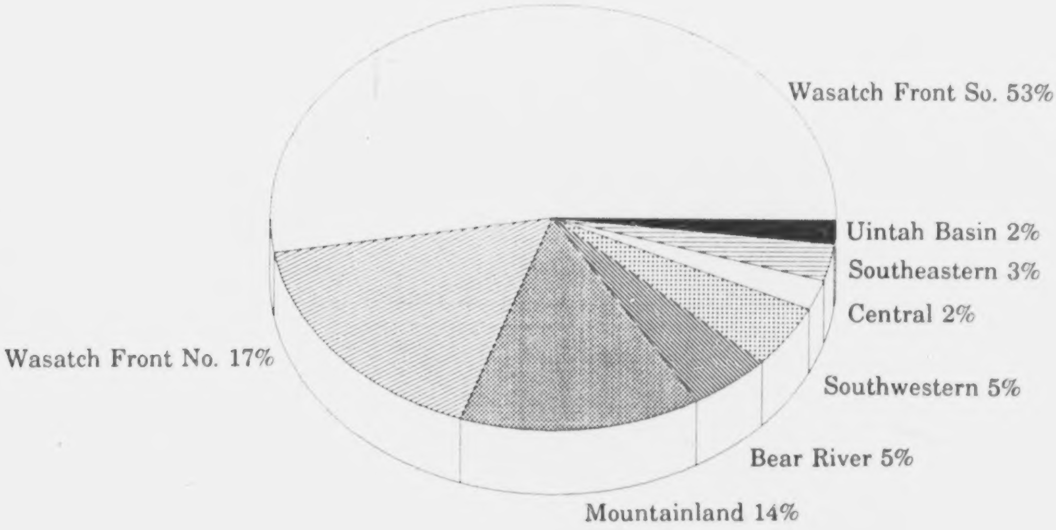
Income

In 1989, total personal income in Utah rose 8 percent to $22.24 billion. Total personal income in Salt Lake County was $10.31 billion, making up 46.4 percent of the Utah total. Per capita personal income in Utah increased 6.8 percent from 1988 to 1989 to $13,027. Not surprisingly, per capita personal income was highest in Summit county at $19,930. Per capita income in Piute county was only $8,250, the lowest in the state. Sanpete, Wayne and San Juan counties also had per capita income levels of less than $10,000. Information on personal income and per capita income from 1986 to 1989 for each of the counties is contained in the detail tables.

Taxes

Although the total assessed property valuation in Utah decreased slightly from 1988 to 1989, property tax collections increased 1.9 percent from $722,324,000 to $735,970,000. Property tax collections were up 73.8 percent in Millard county, the largest increase in the state; and down 10.1 percent in Garfield county which showed the greatest decrease. Gross taxable sales for the state were $13,892.2 million in 1989, up 6.7 percent from the 1988 figure. In Salt Lake County gross taxable sales were $6,845.6 million, 49.3 percent of the state total. Rich county had the greatest increase in gross taxable sales with a 63.3 percent increase. In addition to Rich county, three other Utah counties had increases in gross taxable sales greater than 30 percent: Piute (36.3 percent), Wayne (35.7 percent), and Daggett county (34.0 percent). Gross taxable sales in Millard county were down 61.3 percent from 1988. Beaver county was the only county other than Millard to have a decrease in gross taxable sales (-1.1 percent). Figure 3 shows the percentage change in gross taxable sales by county. Distribution of gross taxable sales by multi-county district is shown in Figure 4.

Figure 4
Distribution of Gross Taxable Sales
in Utah by Multi-County District, 1989



Wasatch Front District split with Salt Lake and Tooele in the South, and Davis, Weber and Morgan in the North

Construction

In 1989 construction activity finally reversed its downward trend with the value of total construction up 19.1 percent. The value of both residential and nonresidential construction increased significantly over 1988 figures. Residential construction valuation rose 8.4 percent even though the number of dwelling units decreased slightly. Nonresidential construction valuation was up 43.2 percent due to several major construction projects being authorized. San Juan county had the biggest gain in construction activity with an increase of 133.5 percent in the value of total construction. The value of total construction was also up more than 60 percent in four other counties: Summit (61.7), Wasatch (75.4), Beaver (82.9) and Tooele county (83.8). In four counties the value of total construction was down more than 50 percent. Emery (-50.2), Wayne (-50.5), Morgan (-51.2) and Piute (-68.4). (The *Utah Construction Report* published quarterly by the Bureau of Economic and Business Research contains more detailed statistics about construction activity in Utah's counties and communities).

Footnotes

County Business Statistics Tables

Totals may not add due to rounding.

[a] 1989 total personal income and per capita personal income for each county are projections by the Utah Department of Employment Security based on data from the Bureau of Economic Analysis. Totals for the state are from the Bureau of Economic Analysis.

[b] Based on Calendar Year.

[c] Based on Fiscal Year.

[d] Comparable data are not available due to under-reporting of construction activity in 1987.

na Not available.

[p] Preliminary.

[r] Revised.

Population:

Utah Population Estimates Committee, "1989 Population Estimates for Utah and Its Counties," Vol. 50, Nos. 1-2, *Utah Economic and Business Review*, Bureau of Economic and Business Research, University of Utah (Salt Lake City, Jan./Feb. 1990), p. 4.

Labor Markets:

Utah Department of Employment Security, *Statistical Abstract, 1988*, pp. 49, 52; *Statistical Abstract, 1987*, pp. 43, 46, 118, 119; 1989 data: Utah Department of Employment Security, preliminary data (Salt Lake City, May, 1990).

Income Data:

Utah Department of Employment Security, *Statistical Abstract, 1988*, pp. 54-56, and *Statistical Abstract, 1987*, pp. 48-50; 1989 data: Utah Department of Employment Security, preliminary data (Salt Lake City, May 1990); and U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economic Information System (Washington, D.C., May 1990).

Tax Data:

Utah State Tax Commission, *Annual Report of the Utah State Tax Commission,* 1985-86, 86-87, 87-88, 88-89 (Salt Lake City, years as indicated); pp. 15, 18, 20, and 32-39; and *Calendar Year and Fourth Quarter of 1989 Gross Taxable Retail Sales and Purchases in the State of Utah,* (Salt Lake City, May 1990), pp. 36-65. Note: Out-of-State Use Tax Collections account for the differences between county figures and state totals.

Miscellaneous Data:

Utah State Tax Commission, *Utah New Car and Truck Sales, First, Second, Third and Fourth Quarters,* 1989 (Salt Lake City, April 1990); and Bureau of Land Management, *News Release,* (Salt Lake City, September, 1989). Note: New Car and Truck Registrations by owner's county do not add to state total figures because of vehicles purchased in Utah by nonresidents.

SELECTED BUSINESS STATISTICS FOR UTAH COUNTIES

BEAVER

	1986	1987	1988	1989	Percent Change 1988-89
Population	4,950	4,900	4,800	4,800[p]	0.0
Labor Market Data:					
Average civilian labor force	2,096[r]	2,097[r]	2,049[r]	2,006[p]	-2.1
Average nonagricultural employment	1,259	1,280	1,274	1,268[p]	-0.5
Income Data:					
Average monthly nonagricultural wage ($)	1,242	1,176	1,238	1,302[p]	5.2
Annual nonagricultural payroll ($ thousands)	18,763	18,066	18,930[r]	19,824[p]	4.7
Total personal income ($ thousands)[r]	44,535	45,292	50,122	52,600[e]	4.9
Per capita personal income ($)[r]	8,923	9,262	10,556	11,190[e]	6.0
Tax Data:					
Total assessed valuation ($ thousands)	192,815	193,454	197,000	192,000	-2.5
Property taxes charged, by all taxing units ($ thousands)	2,263	2,224	2,271	2,165	-4.7
Gross taxable sales ($ thousands)[b]	22,016	20,797	24,817	24,539	-1.1
Net local sales tax allocations ($ thousands)[c]	219	227	257	na	--
Construction (permit-authorized):					
New Dwelling units (number)	14	1	2	12	500.0
Value of new residential construction ($ thousands)	436	22	96	456	373.0
Value of new nonresidential construction ($ thousands)	44	942	229	426	86.1
Value of total construction ($ thousands)	745	974	612	1,119	82.9
Miscellaneous:					
New car and truck registrations by owner's county (number)	132	93	131	150	14.5
Payment in Lieu of Taxes Act ($ thousands)	237	244	246	245	-0.4

BOX ELDER

	1986	1987	1988	1989	Percent Change 1988-89
Population	37,300	37,800	38,000	38,400[p]	1.1
Labor Market Data:					
Average civilian labor force	16,509[r]	17,538[r]	17,828[r]	17,879[p]	0.3
Average nonagricultural employment	13,993	15,051	15,674[r]	15,939[p]	1.7
Income Data:					
Average monthly nonagricultural wage ($)	1,965	2,080	2,114[r]	2,156[p]	2.0
Annual nonagricultural payroll ($ thousands)	329,954	375,584	397,555[r]	412,294[p]	3.7
Total personal income ($ thousands)[r]	437,759	473,202	504,120	524,000[e]	3.9
Per capita personal income ($)[r]	11,695	12,467	13,130	13,500[e]	2.8
Tax Data:					
Total assessed valuation ($ thousands)	1,118,846	1,136,772	1,123,000	1,167,000	3.9
Property taxes charged, by all taxing units ($ thousands)	11,771	12,310	12,131	12,729	4.9
Gross taxable sales ($ thousands)[b]	193,597	203,611	202,248	212,780	5.2
Net local sales tax allocations ($ thousands)[d]	1,971	2,017	2,077	na	--
Construction (permit-authorized):					
New Dwelling units (number)	121	163	113	73	-35.4
Value of new residential construction ($ thousands)	5,991	10,152	8,263	5,910	-28.5
Value of new nonresidential construction ($ thousands)	11,237	3,937	2,137	6,876	221.7
Value of total construction ($ thousands)	20,178	16,058	13,626	14,333	5.2
Miscellaneous:					
New car and truck registrations by owner's county (number)	1,577	1,191	1,148	1,103	-3.9
Payments in Lieu of Taxes Act ($ thousands)	821	848	855	853	-0.2

CACHE

	1986	1987	1988	1989	Percent Change 1988-89
Population	67,800	69,200	70,600	71,700[p]	1.6
Labor Market Data:					
Average civilian labor force	28,340[r]	28,891[r]	29,861[r]	32,005[p]	7.2
Average nonagricultural employment	22,989	23,573	24,811[r]	27,028[p]	8.9
Income Data:					
Average monthly nonagricultural wage ($)	1,183	1,225	1,241[r]	1,248[p]	0.6
Annual nonagricultural payroll ($ thousands)	326,236	346,555	369,427[r]	404,848[p]	9.6
Total personal income ($ thousands)[r]	632,595	682,858	729,129	800,900[e]	9.8
Per capita personal income ($)[r]	9,688	10,346	10,922	11,790[e]	7.9
Tax Data:					
Total assessed valuation ($ thousands)	1,172,759	1,182,737	1,164,000	1,209,000	3.9
Property taxes charged, by all taxing units ($ thousands)	15,241	16,819	16,295	17,034	4.5
Gross taxable sales ($ thousands)[b]	336,407	337,450	364,042	396,271	8.9
Net local sales tax allocations ($ thousands)[c]	3,362	3,413	3,729	na	--
Construction (permit-authorized):					
New Dwelling units (number)	294	205	182	189	3.8
Value of new residential construction ($ thousands)	17,964	13,259	12,585	14,429	14.7
Value of new nonresidential construction ($ thousands)	13,268	5,024	9,375	12,675	35.2
Value of total construction ($ thousands)	34,871	22,554	30,267	29,830	-1.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	2,119	1,668	1,568	1,702	8.5
Payments in Lieu of Taxes Act ($ thousands)	170	179	181	164	-9.4

CARBON	1986	1987	1988	1989	Percent Change 1988-89
Population	23,000	22,500	22,000	21,500[p]	-2.3
Labor Market Data:					
Average civilian labor force	8,967[r]	8,674[r]	8,270[r]	8,496[p]	2.7
Average nonagricultural employment	7,465	7,292	7,227[r]	7,447[p]	3.0
Income Data:					
Average monthly nonagricultural wage ($)	1,566	1,595	1,624[r]	1,628[p]	0.2
Annual nonagricultural payroll ($ thousands)	140,292	139,634	140,879	145,447[p]	3.2
Total personal income ($ thousands)[r]	265,254	266,061	275,020	281,100[e]	2.2
Per capita personal income ($)[r]	11,710	11,975	12,757	13,320[e]	4.4
Tax Data:					
Total assessed valuation ($ thousands)	761,044	742,211	745,000	739,000	-0.8
Property taxes charged, by all taxing units ($ thousands)	11,003	10,721	10,736	10,613	-1.1
Gross taxable sales ($ thousands)[b]	178,323	170,424	173,073	193,730	11.9
Net local sales tax allocations ($ thousands)[c]	1,587	1,651	1,606	na	--
Construction (permit-authorized):					
New Dwelling units (number)	22	31	20	7	-65.0
Value of new residential construction ($ thousands)	1,423	1,569	681	390	-42.8
Value of new nonresidential construction ($ thousands)	1,000	4,000	2,165	2,978	37.6
Value of total construction ($ thousands)	3,273	6,093	4,120	4,891	18.7
Miscellaneous:					
New car and truck registrations by owner's county (number)	860	618	682	661	-3.1
Payments in Lieu of Taxes Act ($ thousands)	324	336	339	339	0.0
DAGGETT					
Population	700	700	700	650[p]	-7.1
Labor Market Data:					
Average civilian labor force	389[r]	464[r]	430[r]	454[p]	5.6
Average nonagricultural employment	265	310	301[r]	316[p]	5.0
Income Data:					
Average monthly nonagricultural wage ($)	1,140	1,086	1,174[r]	1,158[p]	-1.4
Annual nonagricultural payroll ($ thousands)	3,619	4,032	4,239	4,402[p]	3.8
Total personal income ($ thousands)[r]	7,996	8,492	9,518	9,900[e]	4.0
Per capita personal income ($)[r]	10,805	11,101	12,793	14,120[e]	10.4
Tax Data:					
Total assessed valuation ($ thousands)	91,135	97,417	107,000	123,000	15.0
Property taxes charged, by all taxing units ($ thousands)	846	891	971	1,071	10.3
Gross taxable sales ($ thousands)[b]	5,121	3,713	5,294	7,096	34.0
Net local sales tax allocations ($ thousands)[c]	44	41	51	na	--
Construction (permit-authorized):					
New Dwelling units (number)	0	0	0	0	--
Value of new residential construction ($ thousands)	0	0	0	0	--
Value of new nonresidential construction ($ thousands)	0	39	12	26	114.9
Value of total construction ($ thousands)	0	61	59	56	-4.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	30	32	36	28	-22.2
Payments in Lieu fo Taxes Act ($ thousands)	35	36	36	35	-2.8
DAVIS					
Population	175,000	179,000	184,000	187,000[p]	1.6
Labor Market Data:					
Average civilian labor force	76,855[r]	76,060[r]	76,948[r]	79,746[p]	3.6
Average nonagricultural employment	53,009	52,187	52,981[r]	56,678[p]	7.0
Income Data:					
Average monthly nonagricultural wage ($)	1,600	1,590	1,636[r]	1,686[p]	3.1
Annual nonagricultural payroll ($ thousands)	1,017,716	995,878	1,040,371[r]	1,146,664[p]	10.2
Total personal income ($ thousands)[r]	1,923,103	2,021,072	2,137,552	2,361,600[e]	10.5
Per capita personal income ($)[r]	10,965	11,153	11,568	12,580[e]	8.7
Tax Data:					
Total assessed valuation ($ thousands)	3,132,112	3,199,004	3,237,000	3,315,000	2.4
Property taxes charged, by all taxing units ($ thousands)	51,968	52,255	52,909	54,916	3.8
Gross taxable sales ($ thousands)[b]	919,655	868,370	912,829	1,002,316	9.8
Net local sales tax allocations ($ thousands)[c]	8,895	8,784	9,329	na	--
Construction (permit-authorized):					
New Dwelling units (number)	2,293	1,089	819	803	-2.0
Value of new residential construction ($ thousands)	140,914	90,624	63,991	70,005	9.4
Value of new nonresidential construction ($ thousands)	26,158	49,347	36,284	42,717	17.7
Value of total construction ($ thousands)	176,144	150,806	110,444	121,071	9.6
Miscellaneous:					
New car and truck registrations by owner's county (number)	8,277	6,473	6,534	6,326	-3.2
Payments in Lieu of Taxes Act ($ thousands)	21	21	23	22	-4.3

DUCHESNE	1986	1987	1988	1989	Percent Change 1988-89
Population	14,300	13,700	13,100	12,800[p]	-2.3
Labor Market Data:					
Average civilian labor force	5,704[r]	5,388[r]	4,577[r]	4,457[p]	-2.6
Average nonagricultural employment	4,003	3,769	3,420[r]	3,466[p]	1.3
Income Data:					
Average monthly nonagricultural wage ($)	1,419	1,452	1,363[r]	1,401[p]	2.8
Annual nonagricultural payroll ($ thousands)	68,153	65,675	55,942[r]	58,249[p]	4.1
Total personal income ($ thousands)[f]	141,421	134,746	135,133	141,000[e]	4.3
Per capita personal income ($)[f]	9,312	9,439	9,997	10,680[e]	6.8
Tax Data:					
Total assessed valuation ($ thousands)	1,279,794	859,700	875,000	927,000	5.9
Property taxes charged, by all taxing units ($ thousands)	12,035	9,851	10,026	10,353	3.3
Gross taxable sales ($ thousands)[b]	99,945	77,504	71,468	77,103	7.9
Net local sales tax allocations ($ thousands)[c]	815	766	732	na	--
Construction (permit-authorized):					
New Dwelling units (number)	74	43	18	13	-27.8
Value of new residential construction ($ thousands)	1,590	1,486	442	425	-3.9
Value of new nonresidential construction ($ thousands)	2,011	315	1,067	3,345	213.4
Value of total construction ($ thousands)	3,921	2,193	3,529	3,897	10.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	860	343	347	413	19.0
Payments in Lieu of Taxes Act ($ thousands)	427	442	444	335	-24.5
EMERY					
Population	11,800	11,600	11,300	11,300[p]	0.0
Labor Market Data:					
Average civilian labor force	4,008[r]	3,886[r]	3,529[r]	3,666[p]	3.9
Average nonagricultural employment	3,682	3,509	3,446[r]	3,654[p]	6.0
Income Data:					
Average monthly nonagricultural wage ($)	2,158	2,066	2,070[r]	2,205[p]	6.5
Annual nonagricultural payroll ($ thousands)	95,362	86,979	85,604[r]	96,655[p]	12.9
Total personal income ($ thousands)[f]	102,664	98,654	101,281	114,700[e]	13.2
Per capita personal income ($)[f]	8,569	8,475	8,949	10,150[e]	13.4
Tax Data:					
Total assessed valuation ($ thousands)	1,484,720	1,547,634	1,537,000	1,386,000	-9.8
Property taxes charged, by all taxing units ($ thousands)	19,511	22,263	22,098	21,957	-0.6
Gross taxable sales ($ thousands)[b]	60,390	42,287	50,216	53,949	7.4
Net local sales tax allocations ($ thousands)[c]	666	501	620	na	--
Construction (permit-authorized):					
New Dwelling units (number)	3	7	3	3	0.0
Value of new residential construction ($ thousands)	73	443	171	310	81.8
Value of new nonresidential construction ($ thousands)	1,116	81	410	106	-74.1
Value of total construction ($ thousands)	1,347	704	936	466	-50.2
Miscellaneous:					
New car and truck registrations by owner's county (number)	364	254	278	318	14.4
Payments in Lieu of Taxes Act ($ thousands)	395	408	411	391	-4.9
GARFIELD					
Population	4,050	4,050	4,050	4,100[p]	1.2
Labor Market Data:					
Average civilian labor force	1,560[r]	1,528[r]	1,483[r]	1,597[p]	7.7
Average nonagricultural employment	1,381	1,355	1,387[r]	1,511[p]	8.9
Income Data:					
Average monthly nonagricultural wage ($)	1,095	1,082	1,146[r]	1,148[p]	0.2
Annual nonagricultural payroll ($ thousands)	18,147	17,599	19,074[r]	20,820[p]	9.2
Total personal income ($ thousands)[f]	40,636	41,362	44,943	49,000[e]	9.0
Per capita personal income ($)[f]	9,863	10,008	11,029	11,960[e]	8.4
Tax Data:					
Total assessed valuation ($ thousands)	160,133	161,915	168,000	137,000	-18.5
Property taxes charged, by all taxing units ($ thousands)	1,849	1,992	2,041	1,835	-10.1
Gross taxable sales ($ thousands)[b]	24,076	27,387	30,466	33,053	8.5
Net local sales tax allocations ($ thousands)[c]	231	257	290	na	--
Construction (permit-authorized):					
New Dwelling units (number)	35	23	19	6	-68.4
Value of new residential construction ($ thousands)	1,306	926	996	194	-80.5
Value of new nonresidential construction ($ thousands)	491	2,406	1,481	2,183	47.4
Value of total construction ($ thousands)	2,104	3,521	2,732	2,431	-11.0
Miscellaneous:					
New car and truck registrations by owner's county (number)	139	108	117	152	29.9
Payments in Lieu of Taxes Act ($ thousands)	202	208	210	205	-2.4

GRAND

	1986	1987	1988	1989	Percent Change 1988-89
Population	6,850	6,700	6,550	6,500[p]	-0.8
Labor Market Data:					
Average civilian labor force	2,919[r]	2,815[r]	2,711[r]	2,957[p]	9.1
Average nonagricultural employment	2,036	2,029	2,025[r]	2,214[p]	9.3
Income Data:					
Average monthly nonagricultural wage ($)	1,185	1,167	1,230[r]	1,153[p]	-6.3
Annual nonagricultural payroll ($ thousands)	28,962	28,400	29,890[r]	30,628[p]	2.5
Total personal income ($ thousands)[r]	75,411	76,746	81,861	84,000[e]	2.6
Per capita personal income ($)[r]	10,950	11,611	12,504	12,930[e]	3.4
Tax Data:					
Total assessed valuation ($ thousands)	340,782	262,252	268,000	251,000	-6.3
Property taxes charged, by all taxing units ($ thousands)	4,267	3,590	3,667	3,493	-4.7
Gross taxable sales ($ thousands)[b]	51,906	50,165	60,537	65,594	8.4
Net local sales tax allocations ($ thousands)[c]	465	475	553	na	--
Construction (permit-authorized):					
New Dwelling units (number)	6	4	9	4	-55.6
Value of new residential construction ($ thousands)	232	133	249	163	-34.4
Value of new nonresidential construction ($ thousands)	345	1,104	470	917	95.3
Value of total construction ($ thousands)	910	1,843	1,234	1,246	1.0
Miscellaneous:					
New car and truck registrations by owner's county (number)	107	151	181	172	-5.0
Payments in Lieu of Taxes Act ($ thousands)	314	324	327	307	-6.1

IRON

	1986	1987	1988	1989	Percent Change 1988-89
Population	19,500	19,500	19,200	19,500[p]	1.6
Labor Market Data:					
Average civilian labor force	8,221[r]	8,429[r]	8,381[r]	9,025[p]	7.7
Average nonagricultural employment	6,160	6,364	6,257[r]	7,124[p]	13.9
Income Data:					
Average monthly nonagricultural wage ($)	1,106	1,089	1,128[r]	1,203[p]	6.6
Annual nonagricultural payroll ($ thousands)	81,779	83,189	88,382[r]	102,834[p]	16.4
Total personal income ($ thousands)[r]	161,628	167,908	179,518	208,600[e]	16.2
Per capita personal income ($)[r]	8,275	8,654	9,349	10,700[e]	14.5
Tax Data:					
Total assessed valuation ($ thousands)	591,727	663,528	629,000	591,000	-6.0
Property taxes charged, by all taxing units ($ thousands)	8,542	9,083	8,603	8,683	0.9
Gross taxable sales ($ thousands)[b]	136,759	139,310	149,519	164,526	10.0
Net local sales tax allocations ($ thousands)[c]	1,269	1,303	1,434	na	--
Construction (permit-authorized):					
New Dwelling units (number)	82	25	34	97	185.3
Value of new residential construction ($ thousands)	4,165	1,652	2,601	5,784	122.4
Value of new nonresidential construction ($ thousands)	4,057	8,042	6,743	6,858	1.7
Value of total construction ($ thousands)	8,935	10,551	11,815	13,658	15.6
Miscellaneous:					
New car and truck registrations by owner's county (number)	588	521	497	608	22.3
Payments in Lieu fo Taxes Act ($ thousands)	516	535	534	533	-0.2

JUAB

	1986	1987	1988	1989	Percent Change 1988-89
Population	5,800	5,700	5,700	5,800[p]	1.8
Labor Market Data:					
Average civilian labor force	2,050[r]	1,997[r]	2,008[r]	2,026[p]	0.9
Average nonagricultural employment	1,471	1,432	1,561[r]	1,638[p]	4.9
Income Data:					
Average monthly nonagricultural wage ($)	903	955	1,035[r]	1,088[p]	5.1
Annual nonagricultural payroll ($ thousands)	15,942	16,404	19,381[r]	21,397[p]	10.4
Total personal income ($ thousands)[r]	47,939	48,279	53,201	61,000[e]	14.7
Per capita personal income ($)[r]	7,840	8,256	9,325	10,520[e]	12.8
Tax Data:					
Total assessed valuation ($ thousands)	228,530	230,097	225,000	233,000	3.6
Property taxes charged, by all taxing units ($ thousands)	2,938	2,903	2,837	3,061	7.9
Gross taxable sales ($ thousands)[b]	33,151	33,796	28,310	31,314	10.6
Net local sales tax allocations ($ thousands)[c]	326	337	325	na	
Construction (permit-authorized):					
New Dwelling units (number)	5	3	13	2	-84.6
Value of new residential construction ($ thousands)	324	225	498	67	-86.5
Value of new nonresidential construction ($ thousands)	1,142	315	416	34	-91.8
Value of total construction ($ thousands)	1,783	816	1,057	1,178	11.5
Miscellaneous:					
New car and truck registrations by owner's county (number)	187	181	155	149	-3.9
Payments in Lieu of Taxes Act ($ thousands)	264	273	276	277	0.4

	1986	1987	1988	1989	Percent Change 1988-89
KANE					
Population	4,800	4,850	4,900	4,900[p]	0.0
Labor Market Data:					
Average civilian labor force	2,299[r]	2,439[r]	2,480	2,592[p]	4.5
Average nonagricultural employment	1,297	1,397	1,453[r]	1,525[p]	5.0
Income Data:					
Average monthly nonagricultural wage ($)	968	940	1,002[r]	1,011[p]	0.9
Annual nonagricultural payroll ($ thousands)	15,066	15,749	17,466[r]	18,502[p]	5.9
Total personal income ($ thousands)[r]	48,301	48,817	52,742	56,700[e]	7.5
Per capita personal income ($)[r]	10,177	9,973	10,696	11,580[e]	8.3
Tax Data:					
Total assessed valuation ($ thousands)	153,264	170,305	174,000	184,000	5.7
Property taxes charged, by all taxing units ($ thousands)	1,868	1,955	1,996	2,221	11.3
Gross taxable sales ($ thousands)[b]	33,104	35,929	40,690	46,433	14.1
Net local sales tax allocations ($ thousands)[c]	301	332	365	na	--
Construction (permit-authorized):					
New Dwelling units (number)	60	59	57	14	-75.4
Value of new residential construction ($ thousands)	2,590	2,298	2,446	848	-65.3
Value of new nonresidential construction ($ thousands)	494	1,518	1,449	2,528	74.5
Value of total construction ($ thousands)	3,249	4,495	4,377	4,692	7.2
Miscellaneous:					
New car and truck registrations by owners county (number)	157	106	126	116	-7.9
Payments in Lieu of Taxes Act ($ thousands)	206	214	213	231	8.5
MILLARD					
Population	13,600	13,000	12,900	13,000[p]	0.8
Labor Market Data:					
Average civilian labor force	7,210[r]	5,766[r]	5,253[r]	5,267[p]	0.3
Average nonagricultural employment	4,459	3,432	3,191[r]	3,255[p]	2.0
Income Data:					
Average monthly nonagricultural wage ($)	1,726	1,579	1,635[r]	1,671[p]	2.2
Annual nonagricultural payroll ($ thousands)	92,355	65,020	62,598	65,293[p]	4.3
Total personal income ($ thousands)[r]	137,604	120,163	123,985	129,700[e]	4.6
Per capita personal income ($)[r]	9,852	9,352	10,046	10,460[e]	4.1
Tax Data:					
Total assessed valuation ($ thousands)	2,516,509	2,828,600	2,824,000	2,703,000	-4.3
Property taxes charged, by all taxing units ($ thousands)	13,585	16,263	16,205	28,171	73.8
Gross taxable sales ($ thousands)[b]	159,461	38,241	180,515	69,943	-61.3
Net local sales tax allocations ($ thousands)[c]	798	496	1,451	na	--
Construction (permit-authorized):					
New Dwelling units (number)	52	20	12	6	-50.0
Value of new residential construction ($ thousands)	3,330	1,220	714	250	-65.0
Value of new nonresidential construction ($ thousands)	1,159	2,131	293	508	73.6
Value of total construction ($ thousands)	5,029	3,841	1,691	1,159	-31.5
Miscellaneous:					
New car and truck registrations by owners county (number)	430	276	321	331	3.1
Payments in Lieu fo Taxes Act ($ thousands)	392	404	407	424	4.2
MORGAN					
Population	5,500	5,650	5,700	5,850[p]	2.6
Labor Market Data:					
Average civilian labor force	1,659[r]	1,650[r]	1,611[r]	1,658[p]	2.9
Average nonagricultural employment	910	885	884[r]	929[p]	5.1
Income Data:					
Average monthly nonagricultural wage ($)	1,449	1,497	1,476[r]	1,395[p]	-5.5
Annual nonagricultural payroll ($ thousands)	15,824	15,882	15,662	15,561[p]	-0.6
Total personal income ($ thousands)[r]	62,883	66,392	68,944	68,600[e]	-0.5
Per capita personal income ($)[r]	11,959	12,290	12,699	12,250[e]	-3.5
Tax Data:					
Total assessed valuation ($ thousands)	141,751	146,129	145,000	148,000	2.1
Property taxes charged, by all taxing units ($ thousands)	2,005	2,030	2,019	2,093	3.7
Gross taxable sales ($ thousands)[b]	21,388	19,607	18,812	23,363	24.2
Net local sales tax allocations ($ thousands)[c]	234	220	242	na	--
Construction (permit-authorized):					
New Dwelling units (number)	30	26	20	22	10.0
Value of new residential construction ($ thousands)	1,602	1,621	1,113	2,025	81.9
Value of new nonresidential construction ($ thousands)	1,673	345	3,983	667	-83.3
Value of total construction ($ thousands)	3,491	2,226	5,894	2,875	-51.2
Miscellaneous:					
New car and truck registrations by owners county (number)	244	179	281	231	-17.8
Payments in Lieu of Taxes Act ($ thousands)	9	12	10	10	0.0

	1986	1987	1988	1989	Percent Change 1988-89
PIUTE					
Population	1,550	1,550	1,550	1,550[p]	0.0
Labor Market Data:					
Average civilian labor force	384[r]	414[r]	394[r]	356[p]	-9.6
Average nonagricultural employment	173	196	181[r]	184[p]	1.7
Income Data:					
Average monthly nonagricultural wage ($)	948	1,009	1,040[r]	1,005[p]	-3.4
Annual nonagricultural payroll ($ thousands)	1,969	2,360	2,264	2,219[p]	-2.0
Total personal income ($ thousands)[f]	11,337	11,982	12,631	11,600[e]	-8.2
Per capita personal income ($)[f]	7,645	8,385	8,901	8,250[e]	-7.3
Tax Data:					
Total assessed valuation ($ thousands)	27,347	28,441	29,000	31,000	6.9
Property taxes charged, by all taxing units ($ thousands)	341	279	282	342	21.3
Gross taxable sales ($ thousands)[b]	2,614	2,637	2,456	3,347	36.3
Net local sales tax allocations ($ thousands)[c]	38	39	40	na	--
Construction (permit-authorized):					
New Dwelling units (number)	3	2	1	1	0.0
Value of new residential construction ($ thousands)	143	115	55	30	-45.5
Value of new nonresidential construction ($ thousands)	0	18	40	0	-100.0
Value of total construction ($ thousands)	143	133	95	30	-68.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	28	23	22	29	31.8
Payments in Lieu of Taxes Act ($ thousands)	65	66	67	69	3.0
RICH					
Population	2,050	1,950	1,850	1,850[p]	0.0
Labor Market Data:					
Average civilian labor force	822[r]	714[r]	854[r]	880[p]	3.0
Average nonagricultural employment	336	297	349[r]	364[p]	4.3
Income Data:					
Average monthly nonagricultural wage ($)	940	1,017	943[r]	927[p]	-1.7
Annual nonagricultural payroll ($ thousands)	3,788	3,615	3,941	4,066[p]	3.2
Total personal income ($ thousands)[f]	20,085	20,715	23,452	24,800[e]	5.7
Per capita personal income ($)[f]	9,068	9,734	11,616	12,380[e]	6.6
Tax Data:					
Total assessed valuation ($ thousands)	162,686	156,772	158,000	151,000	-4.4
Property taxes charged, by all taxing units ($ thousands)	1,703	1,592	1,608	1,572	-2.2
Gross taxable sales ($ thousands)[b]	8,229	6,831	6,026	9,840	63.3
Net local sales tax allocations ($ thousands)[c]	85	78	86	na	--
Construction (permit-authorized):					
New Dwelling units (number)	3	0	0	0	--
Value of new residential construction ($ thousands)	129	0	0	0	--
Value of new nonresidential construction ($ thousands)	26	0	0	0	--
Value of total construction ($ thousands)	168	0	0	0	--
Miscellaneous:					
New car and truck registrations by owner's county (number)	56	36	44	37	-15.9
Payments in Lieu of Taxes Act ($ thousands)	117	122	123	108	-12.2
SALT LAKE					
Population	697,000	701,000	705,000	712,000[p]	1.0
Labor Market Data:					
Average civilian labor force	348,848[r]	349,848[r]	347,657[r]	359,660[p]	3.5
Average nonagricultural employment	329,939	333,039	340,126[r]	352,875[p]	3.7
Income Data:					
Average monthly nonagricultural wage ($)	1,539	1,598	1,654[r]	1,696[p]	2.5
Annual nonagricultural payroll ($ thousands)	6,091,776	6,388,527	6,750,391[r]	7,180,861[p]	6.4
Total personal income ($ thousands)[f]	8,628,594	9,134,153	9,670,295	10,311,500[e]	6.6
Per capita personal income ($)[f]	12,206	12,788	13,430	14,220[e]	5.9
Tax Data:					
Total assessed valuation ($ thousands)	17,786,728	18,686,759	18,636,000	18,385,000	-1.3
Property taxes charged, by all taxing units ($ thousands)	324,957	343,014	342,011	335,722	-1.8
Gross taxable sales ($ thousands)[b]	6,243,853	6,141,662	6,493,023	6,845,568	5.4
Net local sales tax allocations ($ thousands)[c]	54,638	53,416	58,349	na	--
Construction (permit-authorized):					
New Dwelling units (number)	6,834	2,803	2,139	1,970	-7.9
Value of new residential construction ($ thousands)	335,128	186,978	154,090	151,001	-2.0
Value of new nonresidential construction ($ thousands)	281,538	226,985	116,034	197,713	70.4
Value of total construction ($ thousands)	719,341	499,379	356,933	439,856	23.2
Miscellaneous:					
New car and truck registrations by owner's county (number)	35,922	26,398	27,931	27,402	-1.9
Payments in Lieu of Taxes Act ($ thousands)	59	62	63	60	-4.8

SAN JUAN	1986	1987	1988	1989	Percent Change 1988-89
Population	12,700	12,900	12,900	13,000[p]	0.8
Labor Market Data:					
Average civilian labor force	3,590[r]	3,669[r]	3,744[r]	3,941[p]	5.3
Average nonagricultural employment	2,843	2,954	3,030[r]	3,254[p]	7.4
Income Data:					
Average monthly nonagricultural wage ($)	1,251	1,276	1,355[r]	1,321[p]	-2.5
Annual nonagricultural payroll ($ thousands)	42,668	45,210	49,282[r]	51,566[p]	4.6
Total personal income ($ thousands)[f]	81,157	85,492	92,193	97,300[e]	5.5
Per capita personal income ($)[f]	6,972	7,437	7,931	8,310[e]	4.8
Tax Data:					
Total assessed valuation ($ thousands)	930,453	684,752	676,000	684,000	1.2
Property taxes charged, by all taxing units ($ thousands)	10,460	8,550	8,435	8,532	1.1
Gross taxable sales ($ thousands)[b]	42,869	48,240	44,523	57,683	29.6
Net local sales tax allocations ($ thousands)[c]	495	564	594	na	--
Construction (permit-authorized):					
New Dwelling units (number)	1	3	3	8	166.7
Value of new residential construction ($ thousands)	60	208	231	347	50.2
Value of new nonresidential construction ($ thousands)	353	118	171	662	287.1
Value of total construction ($ thousands)	577	488	546	1,275	133.5
Miscellaneous:					
New car and truck registrations by owner's county (number)	173	115	146	131	-10.3
Payments in Lieu of Taxes Act ($ thousands)	370	383	385	363	-5.7
SANPETE					
Population	16,500	16,600	16,700	16,800[p]	0.6
Labor Market Data:					
Average civilian labor force	6,087[r]	6,306[r]	6,145[r]	6,188[p]	0.7
Average nonagricultural employment	3,471	3,698	3,722[r]	3,872[p]	4.0
Income Data:					
Average monthly nonagricultural wage ($)	992	994	1,030[r]	1,035[p]	0.5
Annual nonagricultural payroll ($ thousands)	41,318	44,110	46,002[r]	48,095[p]	4.5
Total personal income ($ thousands)[f]	132,388	138,039	148,008	156,000[e]	5.4
Per capita personal income ($)[f]	8,009	8,429	9,006	9,270[e]	2.9
Tax Data:					
Total assessed valuation ($ thousands)	335,667	311,316	311,000	306,000	-1.6
Property taxes charged, by all taxing units ($ thousands)	4,646	4,610	4,601	4,215	-8.4
Gross taxable sales ($ thousands)[b]	51,139	54,334	53,767	57,743	7.4
Net local sales tax allocations ($ thousands)[c]	609	645	664	na	--
Construction (permit-authorized):					
New Dwelling units (number)	34	36	31	32	3.2
Value of new residential construction ($ thousands)	1,484	2,041	1,485	1,717	15.6
Value of new nonresidential construction ($ thousands)	1,877	1,051	2,472	2,340	-5.3
Value of total construction ($ thousands)	3,761	3,716	4,424	4,445	0.5
Miscellaneous:					
New car and truck registrations by owner's county (number)	474	336	357	416	16.5
Payments in Lieu of Taxes Act ($ thousands)	369	381	384	389	1.3
SEVIER					
Population	15,800	15,900	15,900	16,000[p]	0.6
Labor Market Data:					
Average civilian labor force	6,370[r]	6,527[r]	6,407[r]	6,528[p]	1.9
Average nonagricultural employment	4,736	4,914	4,955[r]	5,093[p]	2.8
Income Data:					
Average monthly nonagricultural wage ($)	1,282	1,309	1,312[r]	1,394[p]	6.3
Annual nonagricultural payroll ($ thousands)	72,863	77,202	78,022	85,191[p]	9.2
Total personal income ($ thousands)[f]	148,706	159,554	164,440	180,000[e]	9.5
Per capita personal income ($)[f]	9,517	10,420	10,797	11,760[e]	8.9
Tax Data:					
Total assessed valuation ($ thousands)	430,070	419,984	419,000	417,000	-0.5
Property taxes charged, by all taxing units ($ thousands)	5,454	5,218	5,207	5,192	-0.3
Gross taxable sales ($ thousands)[b]	102,366	101,732	101,743	124,538	22.4
Net local sales tax allocations ($ thousands)[c]	968	982	1,027	na	--
Construction (permit-authorized):					
New Dwelling units (number)	31	18	15	15	0.0
Value of new residential construction ($ thousands)	1,935	1,399	881	898	1.9
Value of new nonresidential construction ($ thousands)	3,087	748	435	1,167	168.5
Value of total construction ($ thousands)	5,271	2,910	1,661	2,515	51.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	485	355	456	482	5.7
Payments in Lieu of Taxes Act ($ thousands)	436	447	452	449	-0.7

	1986	1987	1988	1989	Percent Change 1988-89
SUMMIT					
Population	[illegible]	[illegible]	13,400	14,000[p]	4.5
Labor Market Data:					
Average civilian labor force	[illegible]	[illegible]	7,888	8,346[p]	5.8
Average nonagricultural employment	[illegible]	[illegible]	6,985[r]	7,601[p]	8.8
Income Data:					
Average monthly nonagricultural wage ($)	1,030	1,064	1,163[r]	1,183[p]	1.7
Annual nonagricultural payroll ($ thousands)	75,346	83,946	97,496[r]	107,875[p]	10.6
Total personal income ($ thousands)[f]	204,023	229,534	250,824	287,000[e]	14.4
Per capita personal income ($)[f]	15,663	17,232	18,122	19,930[e]	10.0
Tax Data:					
Total assessed valuation ($ thousands)	3,276,597	2,407,626	2,386,000	2,578,000	8.0
Property taxes charged, by all taxing units ($ thousands)	33,371	27,945	27,379	29,623	8.2
Gross taxable sales ($ thousands)[b]	172,968	185,063	200,885	228,849	13.9
Net local sales tax allocations ($ thousands)[c]	1,413	1,541	1,748	na	--
Construction (permit-authorized):					
New Dwelling units (number)	170	206	239	318	33.1
Value of new residential construction ($ thousands)	10,343	18,531	24,111	39,993	65.9
Value of new nonresidential construction ($ thousands)	11,387	3,056	6,418	8,487	32.2
Value of total construction ($ thousands)	23,983	26,390	33,801	54,649	61.7
Miscellaneous:					
New car and truck registrations by owner's county (number)	887	741	763	893	17.0
Payments in Lieu of Taxes Act ($ thousands)	327	334	340	325	-4.4
TOOELE					
Population	28,100	28,100	27,800	27,800[p]	0.0
Labor Market Data:					
Average civilian labor force	11,776[r]	11,324[r]	11,025[r]	11,440[p]	3.8
Average nonagricultural employment	10,327	9,993	9,996[r]	10,563[p]	5.7
Income Data:					
Average monthly nonagricultural wage ($)	1,828	1,890	1,892[r]	1,882[p]	-0.5
Annual nonagricultural payroll ($ thousands)	226,490	226,590	226,905[r]	238,527[p]	5.1
Total personal income ($ thousands)[f]	324,672	336,258	352,386	371,300[e]	5.4
Per capita personal income ($)[f]	11,319	11,750	12,298	12,940[e]	5.2
Tax Data:					
Total assessed valuation ($ thousands)	629,328	633,234	635,000	619,000	-2.5
Property taxes charged, by all taxing units ($ thousands)	8,891	9,252	9,228	9,516	3.1
Gross taxable sales ($ thousands)[b]	113,363	112,646	120,262	120,598	0.3
Net local sales tax allocations ($ thousands)[c]	1,226	1,259	1,367	na	--
Construction (permit-authorized):					
New Dwelling units (number)	80	77	66	81	22.7
Value of new residential construction ($ thousands)	4,388	5,522	4,261	5,748	34.9
Value of new nonresidential construction ($ thousands)	3,470	3,368	4,057	9,396	131.6
Value of total construction ($ thousands)	8,722	10,162	8,890	16,340	83.8
Miscellaneous:					
New car and truck registrations by owner's county (number)	1,200	934	1,003	1,052	4.9
Payments in Lieu of Taxes Act ($ thousands)	688	710	717	712	-0.7
UINTAH					
Population	23,000	21,800	21,500	21,000[p]	-2.3
Labor Market Data:					
Average civilian labor force	9,037[r]	8,625[r]	8,253[r]	8,105[p]	-1.8
Average nonagricultural employment	6,694	6,406	6,450[r]	6,358[p]	-1.4
Income Data:					
Average monthly nonagricultural wage ($)	1,508	1,505	1,502[r]	1,509[p]	0.5
Annual nonagricultural payroll ($ thousands)	121,157	115,651	116,216[r]	115,077[p]	-1.0
Total personal income ($ thousands)[f]	216,171	215,664	224,881	219,200[e]	-2.5
Per capita personal income ($)[f]	8,868	9,409	10,071	10,050[e]	-0.2
Tax Data:					
Total assessed valuation ($ thousands)	1,858,688	1,548,924	1,583,000	1,571,000	-0.8
Property taxes charged, by all taxing units ($ thousands)	20,408	18,283	18,706	18,332	-2.0
Gross taxable sales ($ thousands)[b]	161,599	145,959	155,750	155,847	0.1
Net local sales tax allocations ($ thousands)[c]	1,346	1,383	1,535	na	--
Construction (permit-authorized):					
New Dwelling units (number)	13	7	7	8	14.3
Value of new residential construction ($ thousands)	884	341	450	650	44.4
Value of new nonresidential construction ($ thousands)	2,161	459	1,720	613	-64.4
Value of total construction ($ thousands)	3,245	1,669	2,685	1,469	-45.3
Miscellaneous:					
New car and truck registrations by owner's county (number)	698	498	576	553	-4.0
Payments in Lieu of Taxes Act ($ thousands)	674	697	703	614	-12.7

	1986	1987	1988	1989	Percent Change 1988-89
UTAH					
Population	253,000	258,000	262,000	267,000[p]	1.9
Labor Market Data:					
Average civilian labor force	97,629[r]	99,684[r]	104,688[r]	110,810[p]	5.8
Average nonagricultural employment	72,478	74,478	81,393[r]	87,050[p]	7.0
Income Data:					
Average monthly nonagricultural wage ($)	1,233	1,247	1,318[r]	1,366[p]	3.6
Annual nonagricultural payroll ($ thousands)	1,072,229	1,114,541	1,287,758[r]	1,427,439[p]	10.8
Total personal income ($ thousands)[f]	2,080,093	2,186,568	2,425,104	2,750,800[e]	13.4
Per capita personal income ($)[f]	8,683	9,052	9,993	11,090[e]	11.0
Tax Data:					
Total assessed valuation ($ thousands)	4,389,144	4,406,284	4,375,000	4,341,000	-0.8
Property taxes charged, by all taxing units ($ thousands)	61,003	63,788	63,331	63,536	0.3
Gross taxable sales ($ thousands)[b]	1,233,664	1,255,924	1,366,209	1,549,384	13.4
Net local sales tax allocations ($ thousands)[c]	12,379	12,978	13,988	na	--
Construction (permit-authorized):					
New Dwelling units (number)	1,200	1,095	799	890	11.4
Value of new residential construction ($ thousands)	64,101	70,670	61,196	75,008	22.6
Value of new nonresidential construction ($ thousands)	24,674	61,939	45,490	45,661	0.4
Value of total construction ($ thousands)	104,505	150,902	127,474	150,468	18.0
Miscellaneous:					
New car and truck registrations by owner's county (number)	7,117	5,619	6,087	6,540	7.4
Payments in Lieu of Taxes Act ($ thousands)	480	498	504	506	0.4
WASATCH					
Population	9,450	9,700	9,800	10,000[p]	2.0
Labor Market Data:					
Average civilian labor force	4,031[r]	4,525[r]	4,650[r]	4,773[p]	2.6
Average nonagricultural employment	1,928	2,160	2,358[r]	2,435[p]	3.3
Income Data:					
Average monthly nonagricultural wage ($)	983	1,032	1,254[r]	1,180[p]	-5.9
Annual nonagricultural payroll ($ thousands)	22,749	26,727	35,493[r]	34,478[p]	-2.9
Total personal income ($ thousands)[f]	95,828	97,940	108,060	116,100[e]	7.4
Per capita personal income ($)[f]	10,064	10,146	10,958	11,490[e]	4.9
Tax Data:					
Total assessed valuation ($ thousands)	293,536	296,732	296,000	317,000	7.1
Property taxes charged, by all taxing units ($ thousands)	3,813	3,789	3,784	4,213	11.3
Gross taxable sales ($ thousands)[b]	41,550	41,178	45,340	50,725	11.9
Net local sales tax allocations ($ thousands)[c]	440	434	493	na	--
Construction (permit-authorized):					
New Dwelling units (number)	42	2[d]	40	24	-40.0
Value of new residential construction ($ thousands)	1,617	88[d]	2,112	1,821	-13.8
Value of new nonresidential construction ($ thousands)	349	0[d]	209	2,131	920.6
Value of total construction ($ thousands)	2,064	108[d]	2,513	4,406	75.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	350	289	253	332	31.2
Payments in Lieu of Taxes Act ($ thousands)	308	320	327	326	-0.3
WASHINGTON					
Population	39,100	41,300	43,000	45,100[p]	4.9
Labor Market Data:					
Average civilian labor force	15,106[r]	15,706[r]	16,502[r]	18,263[p]	10.7
Average nonagricultural employment	10,452	10,896	11,740[r]	13,092[p]	11.5
Income Data:					
Average monthly nonagricultural wage ($)	1,101	1,133	1,159[r]	1,193[p]	2.9
Annual nonagricultural payroll ($ thousands)	138,099	148,099	163,291[r]	187,386[p]	14.8
Total personal income ($ thousands)[f]	360,657	393,872	425,273	494,400[e]	16.3
Per capita personal income ($)[f]	9,311	9,416	9,787	10,840[e]	10.8
Tax Data:					
Total assessed valuation ($ thousands)	962,543	1,071,313	1,065,000	1,153,000	8.3
Property taxes charged, by all taxing units ($ thousands)	14,426	15,571	15,477	16,738	8.1
Gross taxable sales ($ thousands)[b]	300,168	290,477	316,165	365,048	15.5
Net local sales tax allocations ($ thousands)[c]	2,557	2,514	2,802	na	--
Construction (permit-authorized):					
New Dwelling units (number)	896	533	493	482	-2.2
Value of new residential construction ($ thousands)	45,019	32,367	31,823	31,938	0.4
Value of new nonresidential construction ($ thousands)	19,827	14,771	13,323	16,621	24.8
Value of total construction ($ thousands)	69,429	50,793	48,827	54,871	12.4
Miscellaneous:					
New car and truck registrations by owner's county (number)	1,482	1,094	1,085	1,568	44.5
Payments in Lieu of Taxes Act ($ thousands)	749	777	774	832	7.5

WAYNE	1986	1987	1988	1989	Percent Change 1988-89
Population	2,100	2,050	2,100	2,100[p]	0.0
Labor Market Data:					
Average civilian labor force	929[r]	1,087[r]	1,042[r]	1,084[p]	4.0
Average nonagricultural employment	438	514	516[r]	566[p]	9.7
Income Data:					
Average monthly nonagricultural wage ($)	1,145	1,252	1,106[r]	955[p]	-13.7
Annual nonagricultural payroll ($ thousands)	6,024	7,724	6,848[r]	6,480[p]	-5.4
Total personal income ($ thousands)[r]	18,854	20,513	20,628	19,700[e]	-4.5
Per capita personal income ($)[r]	9,179	9,699	9,999	9,400[e]	-6.0
Tax Data:					
Total assessed valuation ($ thousands)	50,831	49,472	52,000	59,000	13.5
Property taxes charged, by all taxing units ($ thousands)	526	568	584	652	11.6
Gross taxable sales ($ thousands)[b]	7,110	7,859	8,793	11,933	35.7
Net local sales tax allocations ($ thousands)[c]	74	89	205	na	--
Construction (permit-authorized):					
New Dwelling units (number)	4	2	3	0	-100.0
Value of new residential construction ($ thousands)	231	33	10	0	-100.0
Value of new nonresidential construction ($ thousands)	198	0	17	87	411.8
Value of total construction ($ thousands)	448	86	297	147	-50.5
Miscellaneous:					
New car and truck registrations by owner's county (number)	58	56	65	69	6.2
Payments in Lieu of Taxes Act ($ thousands)	101	104	105	105	0.0

WEBER	1986	1987	1988	1989	Percent Change 1988-89
Population	157,000	157,000	158,000	159,000[p]	0.6
Labor Market Data:					
Average civilian labor force	73,411[r]	73,256[r]	72,336[r]	74,796[p]	3.4
Average nonagricultural employment	59,850	60,310	62,112[r]	63,940[p]	2.9
Income Data:					
Average monthly nonagricultural wage ($)	1,318	1,349	1,398[r]	1,427[p]	2.1
Annual nonagricultural payroll ($ thousands)	946,613	976,537	1,041,836[r]	1,094,925[p]	5.1
Total personal income ($ thousands)[r]	1,938,973	2,020,388	2,133,065	2,259,000[e]	5.9
Per capita personal income ($)[r]	12,165	12,583	13,319	14,010[e]	5.2
Tax Data:					
Total assessed valuation ($ thousands)	3,145,967	3,382,843	3,392,000	3,393,000	0.0
Property taxes charged, by all taxing units ($ thousands)	52,263	56,752	56,886	59,928	5.3
Gross taxable sales ($ thousands)[b]	1,145,342	1,144,237	1,175,411	1,224,910	4.2
Net local sales tax allocations ($ thousands)[c]	10,528	10,593	11,094	na	--
Construction (permit-authorized):					
New Dwelling units (number)	1,042	822	551	552	0.2
Value of new residential construction ($ thousands)	68,073	51,284	37,096	37,417	0.9
Value of new nonresidential construction ($ thousands)	26,779	21,383	15,067	21,882	45.2
Value of total construction ($ thousands)	111,892	101,625	65,425	75,138	14.8
Miscellaneous:					
New car and truck registrations by owner's county (number)	7,768	5,391	5,148	4,992	-3.0
Payments in Lieu of Taxes Act ($ thousands)	40	512	44	39	-11.4

STATE TOTALS	1986	1987	1988	1989	Percent Change 1988-89
Population	1,665,000	1,680,000	1,695,000	1,715,000[p]	1.2
Labor Market Data:					
Average civilian labor force	754,000	757,000[r]	759,000[r]	789,000[p]	4.0
Average nonagricultural employment	634,138	640,298	660,075[r]	691,230[p]	4.7
Income Data:					
Average monthly nonagricultural wage ($)	1,463	1,501	1,549[r]	1,585[p]	2.3
Annual nonagricultural payroll ($ thousands)	11,131,359	11,535,485	12,271,136[r]	13,147,603[p]	7.1
Total personal income ($ thousands)[r]	18,391,267	19,350,716	20,598,309	22,239,000[e]	8.0
Per capita personal income ($)[r]	11,052	11,521	12,189	12,967[e]	6.4
Tax Data:					
Total assessed valuation ($ thousands)	47,645,503	47,506,209	47,413,000	47,313,923	-0.2
Property taxes charged, by all taxing units ($ thousands)	701,957	724,363	722,324	735,970	1.9
Gross taxable sales ($ thousands)[b]	12,378,377	12,188,437	13,016,523	13,892,215	6.7
Net local sales tax allocations ($ thousands)[c]	107,528	107,338	116,975	na	--
Construction (permit-authorized):					
New Dwelling units (number)	13,444	7,305	5,715	5,632	-1.5
Value of new residential construction ($ thousands)	715,472	495,208	412,998	447,821	8.4
Value of new nonresidential construction ($ thousands)	439,921	413,440	272,055	389,603	43.2
Value of total construction ($ thousands)	1,319,527	1,075,096	846,550	1,008,508	19.1
Miscellaneous:					
New car and truck registrations by owner's county (number)	75,901	58,251	60,664	60,699	0.1
Payments in Lieu of Taxes Act ($ thousands)	9,115	9,897	9,498	9,267	-2.4

Utah Business Statistics

UTAH DATA	Jan. 1989	Jan. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	21,544	NA	NA	NA	20,727	NA
New Corporations (no.)	556	611	9.9%	469	467	0.5%
New Car, Truck, and Motor Home Sales (no.)	4,761	NA	NA	NA	5,213	NA
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	74.10	76.40	3.1%	72.65	68.83	5.6%
Lambs (cwt)	62.00	53.00	-14.5%	60.13	62.23	-3.4%
Milk Wholesale (cwt)	12.70	14.90	17.3%	12.78	11.70	9.2%
Alfalfa Hay, Baled (per ton)	84.00	85.00	1.2%	84.83	76.42	11.0%
Cattle Slaughtered (live weight) (thous. of lbs.)	47,767	49,758	4.2%	48,160	46,715	3.1%
Construction						
Total Construction (thous. of dol.) 1	51,107.7	41,876.6	-18.1%	79,165.6	66,611.6	18.8%
Residential	18,810.7	23,772.9	26.4%	36,594.3	33,699.7	8.6%
Nonresidential	20,796.6	11,031.1	-47.0%	26,522.2	20,474.2	29.5%
Additions, Alterations, and Conversions	11,500.4	7,072.6	-38.5%	16,049.1	12,437.7	29.0%
Total Permit Construction (thous. of dol.) 2	51,876.0	58,361.4	12.5%	84,582.8	71,750.2	17.9%
Residential	18,071.0	26,755.6	48.1%	38,042.1	34,658.9	9.8%
Nonresidential	22,249.4	22,946.2	3.1%	32,525.0	23,366.0	39.2%
Additions, Alterations, and Repairs	11,555.6	8,659.6	-25.1%	14,015.7	13,725.3	2.1%
New Dwelling Units (no.)	237	324	36.7%	477	477	0.0%
Employment						
Civilian Labor Force (thous.)	758.5	792.5	4.5%	786.5	760.5	3.4%
Total Employed Persons	722.5	758.0	4.9%	753.5	724.1	4.1%
Unemployed Persons	36.0	34.5	-4.2%	33.0	36.1	-8.6%
Percent Total Labor Force	4.7	4.4	-6.4%	4.2	4.8	-12.7%
Employees on Nonagricultural Payrolls (thous. of jobs)	664.2	695.0	4.6%	691.0	662.3	4.3%
Manufacturing	100.4	102.1	1.7%	102.9	99.4	3.5%
Mining	7.6	8.4	10.5%	8.1	8.1	-0.6%
Contract Construction	21.0	22.6	7.6%	25.9	25.0	3.6%
Transportation, Communication, and Utilities	39.8	41.8	5.0%	40.9	39.6	3.2%
Wholesale Trade	36.9	39.1	6.0%	38.0	35.7	6.4%
Retail Trade	121.3	129.9	7.1%	128.1	121.5	5.4%
Finance, Insurance, and Real Estate	32.9	33.4	1.5%	33.3	33.3	-0.1%
Services 3	158.8	169.2	6.5%	167.6	156.8	6.9%
Federal Government	39.3	39.9	1.5%	40.1	39.4	2.0%
State Government 4	40.3	42.0	4.2%	40.3	38.7	4.0%
Local Government 4	65.9	66.7	1.2%	66.0	64.9	1.7%
Average Weekly Hours						
Manufacturing	40.0	39.7	-0.7%	39.8	40.4	-1.5%
Mining	40.6	41.8	3.0%	41.0	41.3	-0.6%
Wholesale Trade	37.6	36.3	-3.5%	35.8	37.7	-4.9%
Retail Trade	26.7	25.9	-3.0%	27.2	27.9	-2.4%
Amount of Unemployment Compensation (thous. of dol.)	7,877.3	7,100.8	-9.9%	5,042.0	5,825.9	-13.5%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,285.3	1,909.3	-16.5%	2,161.5	2,350.6	-8.0%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	138,032.4	323,015.7	134.0%	173,426.6	151,562.1	14.4%
Sales and Use Tax	41,980.1	176,836.4	321.2%	68,032.1	55,225.0	23.2%
Motor Fuel Tax	9,712.7	10,792.4	11.1%	11,605.8	10,951.0	6.0%
Individual Income Tax	63,435.0	77,680.2	22.5%	54,156.8	54,750.2	-1.1%
Corporation Franchise Tax	2,547.0	-682.3	-126.8%	5,102.0	6,646.4	-23.2%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,365.5	NA	NA	NA	4,312.7	NA
Crude Oil (thous. of bbls.)	2,511.6	2,392.2	-4.8%	2,344.1	2,722.0	-13.9%
Natural Gas (mil. of cu. ft.)	25,437.6	26,569.0	4.4%	23,138.9	23,112.1	0.1%
Coal (thous. short tons)	1,698.0	2,186.0	28.7%	1,741.4	1,514.1	15.0%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	900,976	987,092	9.6%	997,871	875,801	13.9%
Highway Traffic Count Across State Lines	29,022	42,678	47.1%	39,994	NA	NA
Transient Room Taxes (thous. of dol.)	228.8	959.5	319.4%	617.9	523.9	18.0%
Visits, State, Nat'l. Parks, Monuments (thous.)	262.2	287.7	9.7%	1,113.7	1,100.3	1.2%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	495,958	NA	NA	NA	489,389	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	183,595	NA	NA	NA	181,483	NA
Electric Customers (Residential)	484,788	490,046	1.1%	484,596	477,206	1.5%
Electric Customers (Commercial)	47,929	50,417	5.2%	48,365	46,929	3.1%
Natural Gas Customers (Residential & Commercial)	470,120	484,276	3.0%	474,421	460,140	3.1%
Natural Gas Customers (Industrial)	558	568	1.8%	566	550	2.8%

Utah Business Statistics

UTAH DATA	Jan. 1989	Jan. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	53.5r	55.4f	3.6%	55.3	53.3	3.7%
Unemployment Rate	3.2r	3.5	9.4%	3.9	4.5	-11.9%
Auth. Permit Construction (thous. of dol.)	4,176.8	7,961.5	90.6%	10,404.7	9,206.8	13.0%
New Dwelling Units (no.)	33	48	45.5%	68	69	-0.6%
Postal Receipts (thous. of dol.)	546.6	643.0	17.6%	627.5	438.5	43.1%
Electric Customers (Residential)	49,279	49,935	1.3%	49,117	48,198	1.9%
Electric Customers (Commercial)	3,620	3,787	4.6%	3,633	3,482	4.4%
Natural Gas Customers (Residential)	51,626	52,763	2.2%	51,913	50,523	2.8%
Natural Gas Customers (Industrial)	54	56	3.7%	56	53	5.2%
Telephone Lines in Service (Mt. Bell)(Residential)	56,095	NA	NA	NA	55,457	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,653	NA	NA	NA	11,396	NA
Salt Lake County						
Non-Ag. Employment (thous.)	340.9r	352.7f	3.5%	355.6	341.1	4.2%
Unemployment Rate	3.7r	3.8	2.7%	3.8	4.5	-14.5%
Auth. Permit Construction (thous. of dol.)	26,086.0	22,945.5	-12.0%	36,393.0	30,534.9	19.2%
New Dwelling Units (no.)	104	122	17.3%	166	179	-7.6%
Postal Receipts (thous. of dol.)	7,881.1	8,407.4	6.7%	8,236.8	8,054.7	2.3%
Electric Customers (Residential)	243,697	246,918	1.3%	243,507	240,025	1.5%
Electric Customers (Commercial)	20,968	21,355	1.8%	20,938	20,450	2.4%
Natural Gas Customers (Residential)	224,840	228,089	1.4%	225,055	221,115	1.8%
Natural Gas Customers (Industrial)	239	247	3.3%	243	237	2.6%
Telephone Lines in Service (Mt. Bell)(Residential)	233,038	NA	NA	NA	230,600	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,708	NA	NA	NA	111,154	NA
Utah County						
Non-Ag. Employment (thous.)	82.6r	90.3f	9.3%	86.1	81.9	5.2%
Unemployment Rate	3.3r	3.2	-3.0%	3.9	4.3	-10.5%
Auth. Permit Construction (thous. of dol.)	11,159.6	9,949.4	-10.8%	12,438.2	11,242.1	10.6%
New Dwelling Units (no.)	24	36	50.0%	75	67	11.6%
Postal Receipts (thous. of dol.)	1,217.6	1,541.3	26.6%	1,462.2	1,225.6	19.3%
Electric Customers (Residential)	53,054	53,419	0.7%	53,238	52,406	1.6%
Electric Customers (Commercial)	5,967	7,661	28.4%	6,307	5,980	5.5%
Natural Gas Customers (Residential)	63,104	64,259	1.8%	63,227	61,871	2.2%
Natural Gas Customers (Industrial)	75	73	-2.7%	74	69	7.2%
Telephone Lines in Service (Mt. Bell)(Residential)	66,271	NA	NA	NA	64,823	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	20,965	NA	NA	NA	20,273	NA
Weber County						
Non-Ag. Employment (thous.)	62.9r	65.8f	4.6%	64.9	62.3	4.2%
Unemployment Rate	4.4r	4.8	9.1%	5.0	5.9	-15.5%
Auth. Permit Construction (thous. of dol.)	2,420.3	3,183.3	31.5%	6,325.1	5,509.2	14.8%
New Dwelling Units (no.)	13	18	38.5%	46	46	0.0%
Postal Receipts (thous. of dol.)	709.7	787.1	10.9%	692.9	682.0	1.6%
Electric Customers (Residential)	54,259	54,809	1.0%	54,305	53,568	1.4%
Electric Customers (Commercial)	5,064	5,089	0.5%	5,035	4,932	2.1%
Natural Gas Customers (Residential)	50,749	51,311	1.1%	50,659	49,879	1.6%
Natural Gas Customers (Industrial)	81	83	2.5%	84	83	1.1%
Telephone Lines in Service (Mt. Bell)(Residential)	46,932	NA	NA	NA	46,565	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,084	NA	NA	NA	11,942	NA

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	Jan. 1989	Jan. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,113.1	5,431.4	6.2%	5,260.5	4,911.7	7.1%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,273.1	4,602.9	7.7%	4,454.8	4,093.7	8.8%
Industrial Production Indexes (seasonally adjusted) (1977=100)	140.8	141.0	0.1%	141.7	137.7	2.9%
Total Non-Farm Bus. Expend. on New Plants & Equip. (bil.) (qtly.)	459.5	503.5	9.6%	478.9	433.5	10.5%
Net Exports of Goods and Services (bil.) (qtly.)	-54.0	-40.1	-25.7%	-46.0	-71.3	-35.5%
Exports of Goods and Services (bil.) (qtly.)	605.6	646.7	6.8%	629.4	554.7	13.5%
Imports of Goods and Services (bil.) (qtly.)	659.6	686.7	4.1%	675.3	625.9	7.9%
Index of Leading Indicators (1982=100)	146.0	145.3	-0.5%	144.8	143.4	1.0%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	121.1	127.4	5.2%	124.5	118.7	4.9%
CPI-U (All Urban Consumers) Food & Beverages	122.0	130.0	6.6%	125.6	118.7	5.8%
CPI-U (All Urban Consumers) Housing	120.7	125.9	4.3%	123.4	118.8	3.9%
CPI-U (All Urban Consumers) Transportation	111.1	117.2	5.5%	114.6	109.1	5.1%
CPI-U (All Urban Consumers) Medical Care	143.8	155.9	8.4%	150.3	139.4	7.8%
CPI-U (All Urban Consumers) Energy	89.0	97.6	9.7%	95.0	89.4	6.3%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	111.0	117.5	5.9%	114.0	108.4	5.2%
GNP Price Deflator (1982=100) (qtly.)	124.5	129.7	4.2%	126.7	121.7	4.1%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	123.3	124.4	0.9%	123.9	121.9	1.7%
Total Civilian Employment (mil.)	116.6	117.9	1.1%	117.4	115.2	2.0%
Unemployment Rate	5.4	5.3	-1.9%	5.3	5.5	-4.0%
Construction						
Total Construction (mil. of dol.)	17,535.5	16,470.7	-6.1%	20,922.7	21,808.2	-4.1%
Residential	8,134.7	7,578.6	-6.8%	9,795.9	10,282.0	-4.7%
Nonresidential	6,997.7	6,237.5	-10.9%	7,321.0	7,606.4	-3.8%
Non-Building	2,403.1	2,654.6	10.5%	3,805.9	3,919.8	-2.9%
New Dwelling Units (no.)	99,184	86,535	-12.8%	110,053	123,463	-10.9%
Interest Rates						
Federal Funds Rate	9.12	8.23	-9.8%	9.14	7.76	17.8%
Short Term (3-month Treasury bill rate)	8.29	7.64	-7.8%	8.06	6.87	17.3%
Long Term (30-year Treasury bond yields)	9.07	8.39	-7.5%	8.53	9.00	-5.2%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	10.50	10.11	-3.7%	10.84	9.46	14.6%
Mortgage Rates (new homes)	9.20	9.59	4.2%	9.79	8.85	10.6%

Sources: *Survey of Current Business*, U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, **Export/Import Data**, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates, New Home Mortgage Rates.

Business Conditions Digest, U.S. Department of Commerce: Industrial Production Indexes, Total Non-Farm Business Expenditures for New Plants and Equipment.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

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PERSONAL INCOME IN UTAH COUNTIES, 1988

Boyd L. Fjeldsted
Senior Research Economist

The Bureau of Economic and Business Research of the University of Utah has been designated a member of the BEA User Group by the United States Department of Commerce, Bureau of Economic Analysis. As such, the Bureau of Economic and Business Research annually receives unpublished BEA estimates of county personal income for the purpose of providing public dissemination of the information. The data in Table 1 have been obtained from the most recently released BEA county personal income estimates for the State of Utah.

Personal Income and Its Components

Personal Income is defined by the BEA to comprise the money value of current income received from all sources by, or on behalf of, persons residing in a given geographical area, including income received in both monetary and non-monetary forms. Specifically, personal income consists of:

- Wage and salary disbursements, excluding social security taxes and other personal contributions for social insurance paid by employees.
- Other labor income, which consists of employer contributions for private life and medical insurance, private retirement programs and other private "fringe" benefits.
- Net income of owners of unincorporated enterprises, excluding self-employed contributions for social security and other social insurance.
- Property income, including dividends, interest and rent.
- Transfer payments, i.e., personal payments by government or business for which no services are currently rendered.

Income derived from participation in the work force is referred to as *labor and proprietors' income* or *earnings* and includes (1) wage and salary disbursements, (2) other labor income and (3) net income of owners of unincorporated enterprises. *Net labor and proprietors' income* or *net earnings* is arrived at by deducting social security taxes and other social insurance contributions paid by workers, including self-employment contributions paid by owners of unincorporated enterprises. Since wage and salary disbursements and other labor income are reported on a place-of-work basis, labor and proprietors' income must be adjusted for the effect of interarea commuting in order to arrive at the earnings component of personal income (which is defined on a place-of-residence basis). This adjustment is accomplished by estimating the difference between the net earnings of persons who reside in a given area but who work in other areas, and the net earnings of persons who work in the given area but reside in other areas. This difference is referred to as the *residence adjustment*.

BEA Income Imputations

It should be noted that the BEA personal income estimates include imputations or allowances for the value of certain types of income realizations, even though no monetary transaction is involved. These include imputations for:

- wages and salaries paid in kind, i.e., in the form of food, clothing or lodging;
- rental value of owner-occupied dwelling units;
- food and fuel produced and consumed on farms; and
- interest earned on money deposited with financial intermediaries for which no interest is actually paid or credited.

This last item includes, for example, an imputation for the interest earning potential of ordinary bank demand deposit accounts, even though banks do not ordinarily pay interest on such accounts. For the state as a whole, imputed interest amounts to roughly 35 percent of total interest, while imputed rent amounts to approximately 40 percent of total rent.

BEA Person Concept

It should be further noted that personal income as defined by the Bureau of Economic Analysis includes the income of certain legal entities not ordinarily regarded as "persons," including non-profit institutions serving individuals, private non-insured pension funds, health and welfare funds and private trust funds. In effect the current earnings of these organizations are credited directly to the ultimate beneficiaries for personal income accounting purposes. Since such organizations are considered to be persons, benefit payments by them to individuals are considered to be transfer payments among persons and not part of personal income. The undistributed earnings of life insurance carriers and private non-insured pension funds are also credited to persons for personal income accounting purposes.

County Income by Type and Industry

Table 1 presents the most recent Bureau of Economic Analysis county estimates of personal income broken down by type, and earnings broken down by industrial source. It should be stressed that personal income is presented on a place-of-residence basis, i.e., credited to the area of the recipient's residence; while labor and proprietors' income (earnings) is presented on a place-of-work basis, i.e., credited to the area in which the earning activity takes place.

Table 1 also reveals the industrial structure of income generation in Utah and its 29 counties. Somewhat surprising, perhaps, is the fact that in only six counties does farming account for more than 15 percent of total earnings. These six counties are Rich (with farming accounting for 48 percent of total earnings), Piute (39 percent), Beaver (23 percent), Wayne (18 percent), Morgan (17 percent) and Sanpete (16 percent). For the state as a whole, farming accounts for just over 1 percent of total earnings.

Those counties whose economies may be characterized as distinctly oriented toward mining (including oil and gas extraction) include Emery (where the mining sector accounts for 37 percent of total earnings), Carbon (36 percent), San Juan (21 percent) and Uintah (19 percent). Those counties whose economies have a distinctly manufacturing orientation include Box Elder (where manufacturing accounts for 70 percent of total earnings), Cache (27 percent), Weber (21 percent) and Utah (19 percent).

There are two counties whose economies are dominated by the federal government: Tooele (where federal government accounts for 61 percent of total earnings) and Davis (39 percent). In Daggett the federal government accounts for 28 percent of total earnings; but in addition the state and local government sector accounts for 23 percent of total earnings—so that 51 percent of total earnings in Daggett comes from government employment.

There are only three counties for which property income and transfer payments account for 40 percent or more of total personal income. These are Piute (49 percent), Washington (44 percent) and Beaver (41 percent). The relatively high dependence of these counties on property income and transfer payments can be explained in part by the relatively high proportion of persons of retirement age in their populations. In 1980 Piute County, for example, led the state with 17 percent of its population age 65 or over. Washington and Beaver Counties were not far behind, with 13 to 14 percent of their populations being age 65 or over (U.S. Department of Commerce, Bureau of the Census, 1980 Census Report PC80-1-B46, Table 44).

Growth Sectors and Growth Counties

For the state as a whole both the durable and nondurable manufacturing sectors showed substantial growth in labor and proprietors' income between 1987 and 1988. Nondurable goods led the way, with an increase of 12 percent, followed by durable goods with an increase of 10 percent. Wholesale trade and services were not far behind, both with increases of 9 percent over the previous year. Farm earnings also continued to grow, with an increase of 8 percent over the previous year.

Those counties exhibiting relative growth in the nondurable goods manufacturing sector that was substantially higher than the state average were Box Elder (with an increase of 99 percent between 1987 and 1988), Utah (46 percent), Iron (23 percent) and Grand (21 percent). Those counties showing high growth in the durable goods manufacturing sector were Utah (with an increase of 36 percent), Cache (23 percent), San Juan (22 percent) and Summit (17 percent).

Those counties experiencing rapid growth in the wholesale trade sector were Summit (with an increase of 73 percent over the previous year), Utah (55 percent), Washington (21 percent), and Duchesne (17 percent). Those counties exhibiting relatively rapid growth in earnings in the services sector were Wayne (with an increase of 27 percent) Garfield (25 percent), Daggett (20 percent) and Wasatch (19 percent).

Six counties stood out in relative growth in personal income between 1987 and 1988. Rich recorded the highest (with an increase of 13 percent) followed by Daggett (12 percent), Utah (11 percent) Beaver (11 percent), Wasatch (10 percent) and Juab (10 percent).

Per Capita Personal Income

Per capita personal income figures for Utah counties in 1988 are also shown in Table 1 (on the second line). Summit County had the highest per capita personal income at $18,122, followed by Salt Lake ($13,430), Weber ($13,319) and Box Elder ($13,130). A per capita personal income time series for the State of Utah from 1979 to 1989 is presented in Table 2. These data show that Utah's position was 82 percent of the national average in 1979, but has since slipped to only 74 percent of the national average. It should be noted that the estimates of per capita personal income in Table 2 are based on Bureau of the Census revised state population estimates, whereas the estimates of per capita personal income in Table 1 are based on estimates of county population that have not been revised to reflect the revision in the state population estimates. This accounts for the slight discrepancy between the estimated per capita personal income for the State of Utah as shown in Table 1 as compared to Table 2.

Table 2
Utah Per Capita Personal Income
1979-1989

Year	Amount (dollars)	Percent of U.S. Average	State Rank
1979	7,407	82	41
1980	7,952	80	45
1981	8,660	79	45
1982	9,041	79	45
1983	9,400	78	45
1984	10,120	77	46
1985	10,653	77	47
1986[r]	11,052	76	47
1987[r]	11,521	74	47
1988[r]	12,180	74	48
1989[P]	13,027	74	47

[r] revised
[P] preliminary

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Figure 1
Total Personal Income by County
State of Utah, 1988

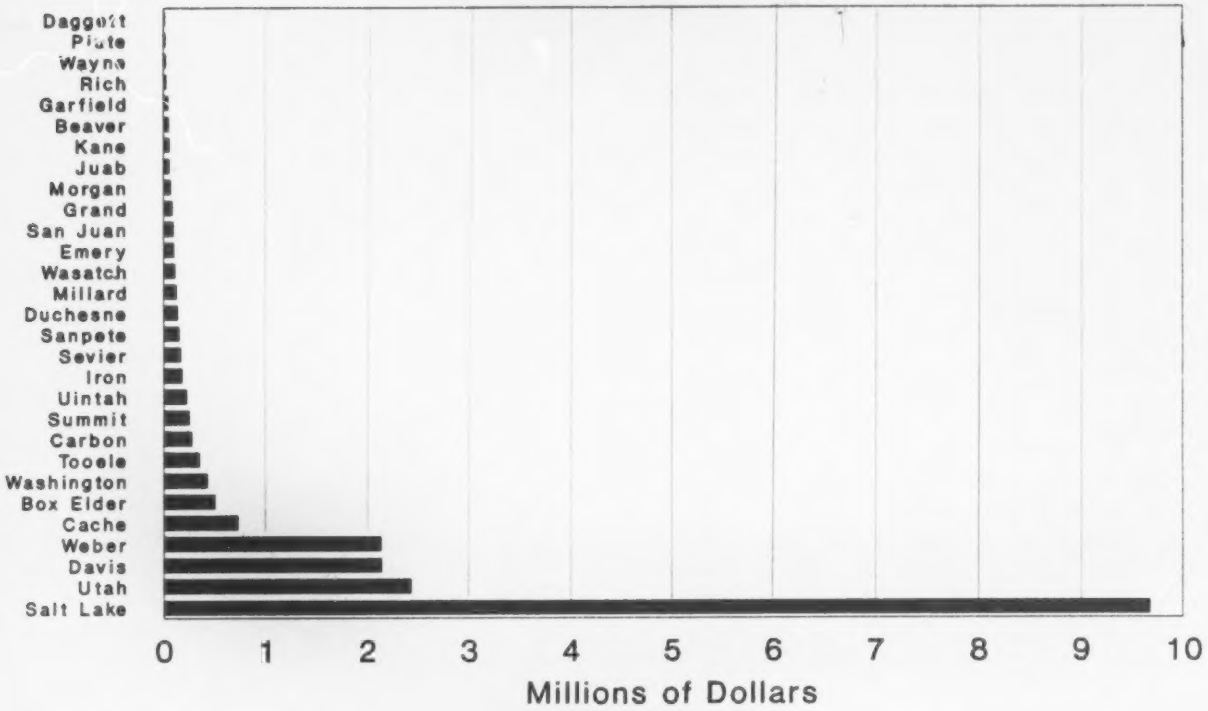
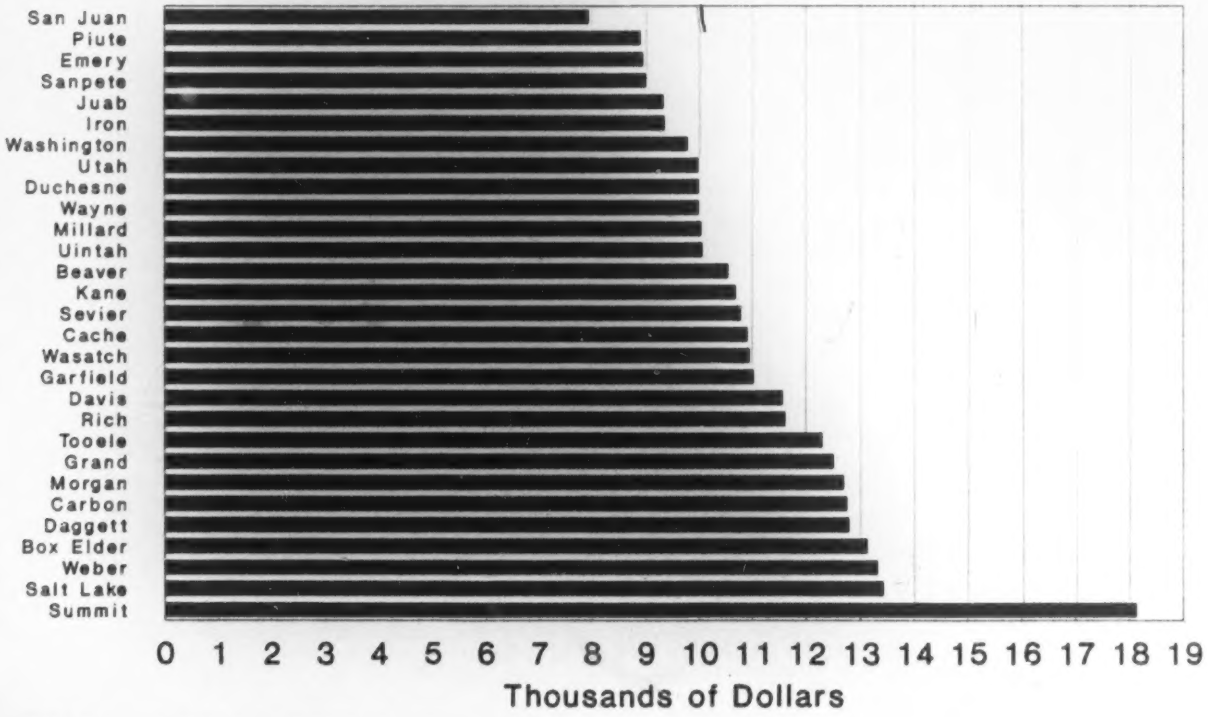


Figure 2
Per Capita Personal Income by County
State of Utah, 1988



Data Source: U.S. Department of Commerce

Figure 3
Percent Distribution of Earnings by Industrial Source — State of Utah, 1988

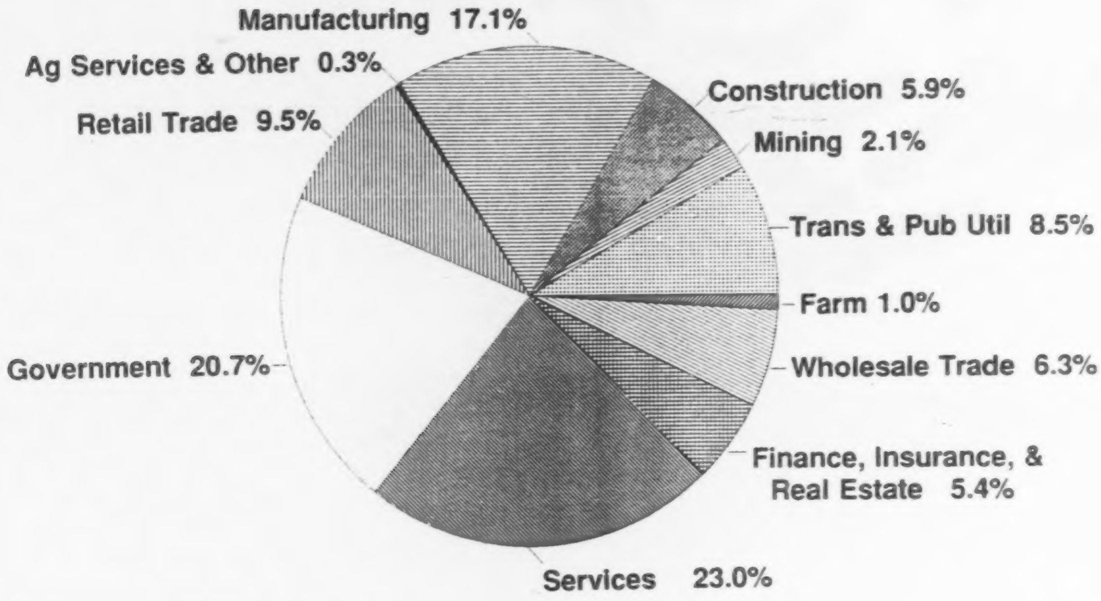
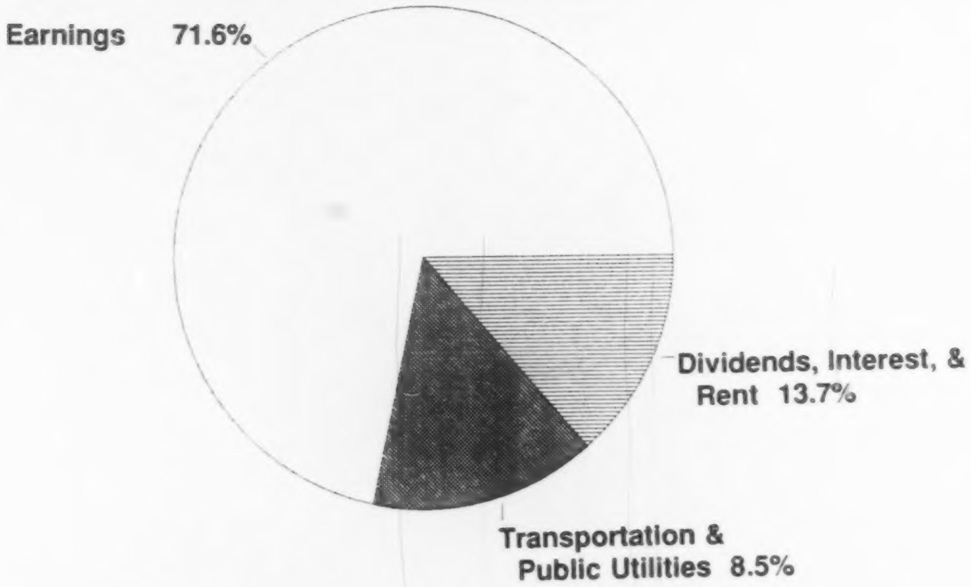


Figure 4
Percent Distribution of Personal Income by Type — State of Utah, 1988



Data Source: U.S. Department of Commerce

Table 1
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	State of Utah			Beaver			Box Elder		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	20,598,309	100.0[a]	6.4	50,122	100.0[a]	10.7	504,120	100.0[a]	6.5
Per capita personal income (dollars)	12,189	73.9[b]	5.8	10,556	64.0[b]	14.0	13,130	79.6[b]	5.3
Derivation of total personal income:									
Total earnings by place of work	15,645,576	100.0[c]	6.4	30,707	100.0[c]	14.7	508,028	100.0[c]	5.2
Less: Contributions for social insurance	991,002	6.3[c]	10.8	1,800	5.9[c]	20.3	31,587	6.2[c]	10.6
Plus: Residence adjustment	84,186	0.5[c]	19.9	599	2.0[c]	15.2	(94,063)	−18.5[c]	(U)
Equals: Net earnings by place of residence	14,738,760	71.6[a]	6.2	29,506	58.9[a]	14.4	382,378	75.9[a]	6.3
Plus: Dividends, interest, and rent	2,827,067	13.7[a]	8.7	8,897	17.8[a]	8.2	56,757	11.3[a]	8.5
Plus: Transfer payments	3,032,482	14.7[a]	5.7	11,719	23.4[a]	3.9	64,985	12.9[a]	6.1
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	12,896,892	82.4[c]	6.5	19,169	62.4[c]	10.4	410,977	80.9[c]	5.9
Other labor income	1,186,302	7.6[c]	7.4	1,652	5.4[c]	14.8	55,738	11.0[c]	6.0
Proprietors' income	1,562,382	10.0[c]	5.0	9,886	32.2[c]	24.2	41,313	8.1[c]	−2.7
Farm	150,860	1.0[c]	11.2	5,822	19.0[c]	43.0	16,108	3.2[c]	−8.5
Nonfarm	1,411,522	9.0[c]	4.4	4,064	13.2[c]	4.4	25,205	5.0[c]	1.3
Earnings by industry									
Farm	195,797	1.3[c]	8.0	6,947	22.6[c]	33.8	20,146	4.0[c]	−7.3
Nonfarm	15,449,779	98.7[c]	6.4	23,760	77.4[c]	10.1	487,882	96.0[c]	5.8
Private	12,216,190	78.1[c]	7.1	17,056	55.5[c]	10.9	454,202	89.4[c]	5.9
Agricultural services and other	47,979	0.3[c]	5.4	159	0.5[c]	9.7	(D)	(D)	(D)
Mining	328,813	2.1[c]	5.5	67	0.2[c]	(U)	(D)	(D)	(D)
Construction	923,235	5.9[c]	−0.9	1,924	6.3[c]	15.8	19,454	3.8[c]	6.2
Manufacturing	2,677,716	17.1[c]	10.8	1,179	3.8[c]	29.0	353,699	69.6[c]	5.4
Nondurable goods	700,666	4.5[c]	11.7	779	2.5[c]	(U)	5,151	1.0[c]	98.5
Durable goods	1,977,050	12.6[c]	10.4	400	1.3[c]	(U)	348,548	68.6[c]	4.7
Transportation and public utilities	1,324,443	8.5[c]	6.7	(D)	(D)	(D)	8,391	1.7[c]	28.2
Wholesale trade	984,769	6.3[c]	8.9	233	0.8[c]	−2.9	8,762	1.7[c]	6.4
Retail trade	1,490,954	9.5[c]	4.9	3,388	11.0[c]	7.2	25,574	5.0[c]	4.8
Finance, insurance, and real estate	842,351	5.4[c]	1.8	675	2.2[c]	13.1	5,307	1.0[c]	6.7
Services	3,595,930	23.0[c]	8.6	(D)	(D)	(D)	29,937	5.9[c]	3.0
Government	3,233,589	20.7[c]	3.9	6,704	21.8[c]	8.2	33,680	6.6[c]	4.0
Federal civilian	1,092,254	7.0[c]	3.7	1,073	3.5[c]	11.8	3,055	0.6[c]	11.2
Military	212,366	1.4[c]	1.7	216	0.7[c]	4.3	1,650	0.3[c]	2.9
State and local	1,928,969	12.3[c]	4.3	5,415	17.6[c]	7.7	28,975	5.7[c]	3.4

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Cache			Carbon			Daggett		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	729,129	100.0[a]	6.8	275,020	100.0[a]	3.4	9,518	100.0[a]	12.1
Per capita personal income (dollars)	10,922	66.2[b]	5.6	12,757	77.4[b]	6.5	12,793	77.6[b]	15.2
Derivation of total personal income:									
Total earnings by place of work	490,917	100.0[c]	7.0	184,558	100.0[c]	2.4	5,977	100.0[c]	13.1
Less: Contributions for social insurance	29,953	6.1[c]	12.4	12,028	6.5[c]	8.3	313	5.2[c]	8.7
Plus: Residence adjustment	54,758	11.2[c]	6.7	13,052	7.1[c]	11.7	1,417	23.7[c]	9.4
Equals: Net earnings by place of residence	515,722	70.7[a]	6.7	185,582	67.5[a]	2.7	7,081	74.4[a]	12.6
Plus: Dividends, interest, and rent	105,720	14.5[a]	8.5	35,503	12.9[a]	8.5	958	10.1[a]	9.1
Plus: Transfer payments	107,687	14.8[a]	5.4	53,935	19.6[a]	2.6	1,479	15.5[a]	11.8
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	387,440	78.9[c]	8.0	148,863	80.7[c]	2.1	4,444	74.4[c]	7.6
Other labor income	37,461	7.6[c]	2.0	18,363	9.9[c]	1.3	425	7.1[c]	17.1
Proprietors' income	66,016	13.4[c]	4.7	17,332	9.4[c]	6.6	1,108	18.5[c]	40.4
Farm	11,102	2.3[c]	2.7	2,249	1.2[c]	11.1	457	7.6[c]	156.7
Nonfarm	54,914	11.2[c]	5.1	15,083	8.2[c]	6.0	651	10.9[c]	6.5
Earnings by industry									
Farm	15,373	3.1[c]	1.7	2,498	1.4[c]	9.2	513	8.6[c]	111.1
Nonfarm	475,544	96.9[c]	7.2	182,060	98.6[c]	2.3	5,464	91.4[c]	8.4
Private	340,569	69.4[c]	6.4	149,275	80.9[c]	2.5	2,402	40.2[c]	–1.1
Agricultural services and other	3,806	0.8[c]	11.4	163	0.1[c]	19.0	(L)	(L)	(L)
Mining	265	0.1[c]	–3.3	66,250	35.9[c]	0.3	(L)	(L)	(L)
Construction	35,725	7.3[c]	2.4	6,541	3.5[c]	–14.8	208	3.5[c]	1.0
Manufacturing	132,472	27.0[c]	5.0	4,842	2.6[c]	11.4	0	0.0[c]	(U)
Nondurable goods	86,110	17.5[c]	–2.5	3,543	1.9[c]	10.5	0	0.0[c]	(U)
Durable goods	46,362	9.4[c]	22.6	1,299	0.7[c]	13.9	0	0.0[c]	(U)
Transportation and public utilities	15,860	3.2[c]	2.1	14,715	8.0[c]	10.9	925	15.5[c]	0.1
Wholesale trade	9,533	1.9[c]	9.0	7,211	3.9[c]	1.4	0	0.0[c]	(U)
Retail trade	39,069	8.0[c]	3.0	15,944	8.6[c]	0.7	342	5.7[c]	–34.4
Finance, insurance, and real estate	12,435	2.5[c]	–6.6	4,131	2.2[c]	2.9	0	0.0[c]	(U)
Services	91,404	18.6[c]	14.6	29,478	16.0[c]	8.6	921	15.4[c]	19.8
Government	134,975	27.5[c]	9.3	32,785	17.8[c]	1.5	3,062	51.2[c]	17.2
Federal civilian	8,901	1.8[c]	10.8	5,731	3.1[c]	3.2	1,653	27.7[c]	28.9
Military	3,922	0.8[c]	7.5	963	0.5[c]	4.2	(L)	(L)	(L)
State and local	122,152	24.9[c]	9.3	26,091	14.1[c]	1.0	1,378	23.1[c]	5.9

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Davis			Duchesne			Emery		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	2,137,552	100.0[a]	5.8	135,133	100.0[a]	0.3	101,281	100.0[a]	2.7
Per capita personal income (dollars)	11,568	70.2[b]	3.7	9,997	60.6[b]	5.9	8,949	54.3[b]	5.6
Derivation of total personal income:									
Total earnings by place of work	1,425,115	100.0[c]	5.2	91,395	100.0[c]	–6.7	111,934	100.0[c]	–0.3
Less: Contributions for social insurance	82,336	5.8[c]	6.9	5,163	5.6[c]	–6.4	6,833	6.1[c]	3.9
Plus: Residence adjustment	274,059	19.2[c]	5.4	7,723	8.5[c]	229.6	(31,136)	–27.8[c]	(U)
Equals: Net earnings by place of residence	1,616,838	75.6[a]	5.1	93,955	69.5[a]	–0.9	73,965	73.0[a]	2.0
Plus: Dividends, interest, and rent	230,661	10.8[a]	8.6	18,231	13.5[a]	8.2	9,694	9.6[a]	9.3
Plus: Transfer payments	290,053	13.6[a]	7.2	22,947	17.0[a]	–0.8	17,622	17.4[a]	1.9
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	1,203,399	84.4[c]	4.8	59,518	65.1[c]	–14.2	88,713	79.3[c]	–1.2
Other labor income	95,325	6.7[c]	12.0	5,712	6.2[c]	–15.1	12,984	11.6[c]	0.4
Proprietors' income	126,391	8.9[c]	3.6	26,165	28.6[c]	19.6	10,237	9.1[c]	6.5
Farm	6,823	0.5[c]	–7.0	9,149	10.0[c]	56.2	3,470	3.1[c]	14.8
Nonfarm	119,568	8.4[c]	4.3	17,016	18.6[c]	6.3	6,767	6.0[c]	2.7
Earnings by industry									
Farm	9,099	0.6[c]	–5.7	10,245	11.2[c]	46.8	3,865	3.5[c]	12.4
Nonfarm	1,416,016	99.4[c]	5.2	81,150	88.8[c]	–10.8	108,069	96.5[c]	–0.7
Private	735,058	51.6[c]	7.9	60,655	66.4[c]	–13.0	94,502	84.4[c]	–0.7
Agricultural services and other	4,116	0.3[c]	29.9	322	0.4[c]	3.5	138	0.1[c]	8.7
Mining	2,426	0.2[c]	29.2	10,975	12.0[c]	3.3	41,450	37.0[c]	3.8
Construction	81,382	5.7[c]	–2.0	5,941	6.5[c]	–66.2	5,552	5.0[c]	–36.9
Manufacturing	164,752	11.6[c]	7.3	2,732	3.0[c]	–18.5	(D)	(D)	(D)
Nondurable goods	55,132	3.9[c]	10.1	2,121	2.3[c]	0.7	(D)	(D)	(D)
Durable goods	109,620	7.7[c]	6.0	611	0.7[c]	–50.9	(D)	(D)	(D)
Transportation and public utilities	51,660	3.6[c]	16.1	13,106	14.3[c]	10.4	(D)	(D)	(D)
Wholesale trade	56,204	3.9[c]	14.1	4,413	4.8[c]	16.7	633	0.6[c]	6.2
Retail trade	118,560	8.3[c]	9.7	7,933	8.7[c]	1.6	2,979	2.7[c]	–1.0
Finance, insurance, and real estate	28,776	2.0[c]	1.0	1,696	1.9[c]	–4.7	688	0.6[c]	–4.8
Services	227,182	15.9[c]	8.4	13,537	14.8[c]	7.2	(D)	(D)	(D)
Government	680,958	47.8[c]	2.5	20,495	22.4[c]	–3.4	13,567	12.1[c]	–1.0
Federal civilian	438,273	30.8[c]	0.5	3,613	4.0[c]	–22.1	1,352	1.2[c]	8.2
Military	117,707	8.3[c]	0.0	639	0.7[c]	4.1	521	0.5[c]	4.4
State and local	124,978	8.8[c]	13.2	16,243	17.8[c]	1.7	11,694	10.4[c]	–2.2

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Garfield			Grand			Iron		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	44,943	100.0[a]	8.7	81,861	100.0[a]	6.7	179,518	100.0[a]	6.9
Per capita personal income (dollars)	11,029	66.9[b]	10.2	12,504	75.8[b]	7.7	9,349	56.7[b]	8.0
Derivation of total personal income:									
Total earnings by place of work	29,232	100.0[c]	9.6	46,829	100.0[c]	5.9	126,807	100.0[c]	7.0
Less: Contributions for social insurance	1,670	5.7[c]	13.8	2,985	6.4[c]	11.1	7,584	6.0[c]	10.7
Plus: Residence adjustment	1,412	4.8[c]	6.2	9,271	19.8[c]	6.2	(927)	–0.7[c]	(U)
Equals: Net earnings by place of residence	28,974	64.5[a]	9.2	53,115	64.9[a]	5.6	118,296	65.9[a]	6.6
Plus: Dividends, interest, and rent	7,315	16.3[a]	8.5	12,643	15.4[a]	9.4	26,213	14.6[a]	8.5
Plus: Transfer payments	8,654	19.3[a]	6.9	16,103	19.7[a]	8.0	35,009	19.5[a]	6.6
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	20,753	71.0[c]	9.4	31,735	67.8[c]	5.8	95,148	75.0[c]	5.9
Other labor income	1,883	6.4[c]	7.7	2,732	5.8[c]	7.2	8,375	6.6[c]	6.9
Proprietors' income	6,596	22.6[c]	11.0	12,362	26.4[c]	5.8	23,284	18.4[c]	11.4
Farm	3,548	12.1[c]	18.4	898	1.9[c]	18.2	6,283	5.0[c]	29.8
Nonfarm	3,048	10.4[c]	3.4	11,464	24.5[c]	4.9	17,001	13.4[c]	5.8
Earnings by industry									
Farm	3,896	13.3[c]	15.9	1,107	2.4[c]	12.2	7,824	6.2[c]	21.9
Nonfarm	25,336	86.7[c]	8.7	45,722	97.6[c]	5.7	118,983	93.8[c]	6.1
Private	17,446	59.7[c]	8.8	35,274	75.3[c]	7.6	81,950	64.6[c]	5.2
Agricultural services and other	(L)	(L)	(L)	91	0.2[c]	9.6	1,507	1.2[c]	–6.5
Mining	(D)	(D)	(D)	5,297	11.3[c]	5.5	4,754	3.7[c]	12.8
Construction	917	3.1[c]	1.4	3,334	7.1[c]	0.2	7,571	6.0[c]	–1.5
Manufacturing	5,033	17.2[c]	5.0	921	2.0[c]	14.6	5,269	4.2[c]	18.8
Nondurable goods	(D)	(D)	(D)	329	0.7[c]	20.5	3,527	2.8[c]	23.1
Durable goods	(D)	(D)	(D)	592	1.3[c]	11.5	1,742	1.4[c]	10.9
Transportation and public utilities	1,724	5.9[c]	–14.0	5,191	11.1[c]	6.4	10,265	8.1[c]	11.6
Wholesale trade	(D)	(D)	(D)	1,392	3.0[c]	1.5	3,909	3.1[c]	6.4
Retail trade	1,845	6.3[c]	3.9	5,821	12.4[c]	8.8	18,467	14.6[c]	0.7
Finance, insurance, and real estate	522	1.8[c]	2.0	1,015	2.2[c]	–15.6	4,641	3.7[c]	–7.1
Services	6,772	23.2[c]	24.9	12,212	26.1[c]	13.5	25,567	20.2[c]	7.8
Government	7,890	27.0[c]	8.5	10,448	22.3[c]	–0.0	37,033	29.2[c]	8.1
Federal civilian	3,525	12.1[c]	13.5	4,456	9.5[c]	–1.0	9,055	7.1[c]	1.9
Military	172	0.6[c]	4.9	304	0.6[c]	4.1	821	0.6[c]	4.2
State and local	4,193	14.3[c]	4.9	5,688	12.1[c]	0.5	27,157	21.4[c]	10.5

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Juab			Kane			Millard		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	53,201	100.0[a]	10.2	52,742	100.0[a]	8.0	123,985	100.0[a]	3.2
Per capita personal income (dollars)	9,325	56.5[b]	12.9	10,696	64.9[b]	7.2	10,046	60.9[b]	7.4
Derivation of total personal income:									
Total earnings by place of work	30,687	100.0[c]	16.3	26,560	100.0[c]	10.8	96,241	100.0[c]	1.2
Less: Contributions for social insurance	1,911	6.2[c]	23.1	1,712	6.4[c]	15.9	5,531	5.7[c]	3.8
Plus: Residence adjustment	4,189	13.7[c]	-16.8	8,778	33.0[c]	5.7	(5,261)	-5.5[c]	(U)
Equals: Net earnings by place of residence	32,965	62.0[a]	10.3	33,626	63.8[a]	9.2	85,449	68.9[a]	2.4
Plus: Dividends, interest, and rent	7,520	14.1[a]	8.5	9,619	18.2[a]	8.4	19,706	15.9[a]	8.4
Plus: Transfer payments	12,716	23.9[a]	10.8	9,497	18.0[a]	3.9	18,830	15.2[a]	1.5
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	20,781	67.7[c]	16.4	19,134	72.0[c]	11.3	68,057	70.7[c]	-2.1
Other labor income	1,932	6.3[c]	26.3	1,413	5.3[c]	13.4	8,014	8.3[c]	-1.7
Proprietors' income	7,974	26.0[c]	13.6	6,013	22.6[c]	8.6	20,170	21.0[c]	16.0
Farm	2,823	9.2[c]	29.8	1,306	4.9[c]	30.0	8,904	9.3[c]	37.3
Nonfarm	5,151	16.8[c]	6.3	4,707	17.7[c]	3.8	11,266	11.7[c]	3.3
Earnings by industry									
Farm	3,432	11.2[c]	22.9	1,509	5.7[c]	22.3	11,638	12.1[c]	25.9
Nonfarm	27,255	88.8[c]	15.5	25,051	94.3[c]	10.1	84,603	87.9[c]	-1.4
Private	21,152	68.9[c]	20.8	18,273	68.8[c]	9.4	70,876	73.6[c]	-2.8
Agricultural services and other	(L)	(L)	(L)	(D)	(D)	(D)	772	0.8[c]	10.0
Mining	(D)	(D)	(D)	(D)	(D)	(D)	3,887	4.0[c]	-11.0
Construction	(D)	(D)	(D)	1,629	6.1[c]	7.9	9,470	9.8[c]	-32.4
Manufacturing	4,381	14.3[c]	37.2	895	3.4[c]	15.6	5,237	5.4[c]	1.2
Nondurable goods	(D)	(D)	(D)	251	0.9[c]	(U)	1,158	1.2[c]	5.0
Durable goods	(D)	(D)	(D)	644	2.4[c]	(U)	4,079	4.2[c]	0.2
Transportation and public utilities	982	3.2[c]	25.9	1,053	4.0[c]	-0.9	31,989	33.2[c]	7.6
Wholesale trade	2,042	6.7[c]	8.0	1,486	5.6[c]	6.1	1,033	1.1[c]	-16.0
Retail trade	3,310	10.8[c]	-3.1	4,779	18.0[c]	22.8	6,950	7.2[c]	3.9
Finance, insurance, and real estate	807	2.6[c]	1.4	819	3.1[c]	17.7	1,558	1.6[c]	-7.3
Services	5,619	18.3[c]	9.3	7,445	28.0[c]	3.1	9,980	10.4[c]	6.7
Government	6,103	19.9[c]	0.2	6,778	25.5[c]	12.2	13,727	14.3[c]	6.5
Federal civilian	578	1.9[c]	6.4	1,739	6.5[c]	17.7	2,433	2.5[c]	11.8
Military	252	0.8[c]	4.1	196	0.7[c]	4.8	604	0.6[c]	4.1
State and local	5,273	17.2[c]	-0.7	4,843	18.2[c]	10.6	10,690	11.1[c]	5.4

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Morgan			Piute			Rich		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	68,944	100.0[a]	3.8	12,631	100.0[a]	5.4	23,452	100.0[a]	13.2
Per capita personal income (dollars)	12,699	77.0[b]	3.3	8,901	54.0[b]	6.2	11,616	70.4[b]	19.3
Derivation of total personal income:									
Total earnings by place of work	26,748	100.0[c]	–1.5	5,269	100.0[c]	0.2	10,001	100.0[c]	21.4
Less: Contributions for social insurance	1,509	5.6[c]	3.9	267	5.1[c]	11.7	357	3.6[c]	17.0
Plus: Residence adjustment	24,946	93.3[c]	6.7	1,497	28.4[c]	10.6	5,583	55.8[c]	4.8
Equals: Net earnings by place of residence	50,185	72.8[a]	2.3	6,499	51.5[a]	2.0	15,227	64.9[a]	14.8
Plus: Dividends, interest, and rent	8,721	12.6[a]	8.4	2,404	19.0[a]	8.4	4,973	21.2[a]	8.3
Plus: Transfer payments	10,038	14.6[a]	8.3	3,728	29.5[a]	9.8	3,252	13.9[a]	13.7
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	18,058	67.5[c]	–2.1	2,585	49.1[c]	–1.9	5,210	52.1[c]	7.9
Other labor income	1,559	5.8[c]	–4.2	195	3.7[c]	6.6	410	4.1[c]	11.7
Proprietors' income	7,131	26.7[c]	0.6	2,489	47.2[c]	2.1	4,381	43.8[c]	43.9
Farm	3,017	11.3[c]	–0.4	1,829	34.7[c]	1.4	3,766	37.7[c]	54.4
Nonfarm	4,114	15.4[c]	1.3	660	12.5[c]	3.8	615	6.1[c]	1.5
Earnings by industry									
Farm	4,508	16.9[c]	–0.0	2,067	39.2[c]	1.4	4,833	48.3[c]	37.2
Nonfarm	22,240	83.1[c]	–1.8	3,202	60.8[c]	–0.5	5,168	51.7[c]	9.5
Private	17,751	66.4[c]	–3.8	1,465	27.8[c]	–4.6	2,552	25.5[c]	14.2
Agricultural services and other	63	0.2[c]	10.5	(L)	(L)	(L)	110	1.1[c]	6.8
Mining	76	0.3[c]	–3.8	(L)	(L)	(L)	(D)	(D)	(D)
Construction	3,409	12.7[c]	9.8	179	3.4[c]	–17.1	328	3.3[c]	1.5
Manufacturing	4,901	18.3[c]	–18.4	239	4.5[c]	–12.5	(D)	(D)	(D)
Nondurable goods	(D)	(D)	(D)	(D)	(D)	(D)	(L)	(L)	(L)
Durable goods	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)	(D)
Transportation and public utilities	409	1.5[c]	–31.0	252	4.8[c]	13.5	364	3.6[c]	–0.5
Wholesale trade	4,317	16.1[c]	6.1	(L)	(L)	(L)	(D)	(D)	(D)
Retail trade	1,335	5.0[c]	–8.3	101	1.9[c]	1.0	535	5.3[c]	33.4
Finance, insurance, and real estate	604	2.3[c]	–1.5	162	3.1[c]	25.6	(D)	(D)	(D)
Services	2,637	9.9[c]	6.7	439	8.3[c]	–9.7	749	7.5[c]	14.9
Government	4,489	16.8[c]	6.9	1,737	33.0[c]	3.2	2,616	26.2[c]	5.4
Federal civilian	249	0.9[c]	9.7	146	2.8[c]	10.6	317	3.2[c]	6.7
Military	220	0.8[c]	4.3	61	1.2[c]	3.4	98	1.0[c]	4.3
State and local	4,020	15.0[c]	6.9	1,530	29.0[c]	2.5	2,201	22.0[c]	5.2

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Salt Lake			San Juan			Sanpete		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	9,670,295	100.0[a]	5.9	92,193	100.0[a]	7.8	148,008	100.0[a]	7.2
Per capita personal income (dollars)	13,430	81.4[b]	5.0	7,931	48.1[b]	6.6	9,006	54.6[b]	6.8
Derivation of total personal income:									
Total earnings by place of work	8,221,273	100.0[c]	5.5	68,711	100.0[c]	8.2	77,339	100.0[c]	7.2
Less: Contributions for social insurance	532,676	6.5[c]	10.2	3,978	5.8[c]	12.7	4,471	5.8[c]	12.6
Plus: Residence adjustment	(686,493)	–8.4[c]	(U)	(5,723)	–8.3[c]	(U)	21,027	27.2[c]	6.8
Equals: Net earnings by place of residence	7,002,104	72.4[a]	5.4	59,010	64.0[a]	7.8	93,895	63.4[a]	6.9
Plus: Dividends, interest, and rent	1,414,251	14.6[a]	8.8	10,223	11.1[a]	9.0	21,171	14.3[a]	8.6
Plus: Transfer payments	1,253,940	13.0[a]	5.5	22,960	24.9[a]	7.4	32,942	22.3[a]	7.4
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	6,948,795	84.5[c]	5.7	52,417	76.3[c]	8.9	52,340	67.7[c]	5.0
Other labor income	631,168	7.7[c]	5.2	4,929	7.2[c]	9.2	5,076	6.6[c]	4.0
Proprietors' income	641,310	7.8[c]	4.1	11,365	16.5[c]	4.7	19,923	25.8[c]	14.5
Farm	3,531	0.0[c]	–33.0	4,389	6.4[c]	5.6	9,338	12.1[c]	28.5
Nonfarm	637,779	7.8[c]	4.4	6,976	10.2[c]	4.2	10,585	13.7[c]	4.4
Earnings by industry									
Farm	7,300	0.1[c]	–20.0	5,101	7.4[c]	4.4	12,388	16.0[c]	19.1
Nonfarm	8,213,973	99.9[c]	5.6	63,610	92.6[c]	8.5	64,951	84.0[c]	5.2
Private	6,959,307	84.6[c]	6.0	43,563	63.4[c]	7.4	43,533	56.3[c]	5.7
Agricultural services and other	20,091	0.2[c]	1.9	123	0.2[c]	9.8	666	0.9[c]	10.3
Mining	108,612	1.3[c]	6.2	14,604	21.3[c]	22.5	144	0.2[c]	–36.3
Construction	474,641	5.8[c]	–0.1	4,859	7.1[c]	–20.7	5,509	7.1[c]	4.8
Manufacturing	1,307,325	15.9[c]	8.4	2,248	3.3[c]	1.0	11,365	14.7[c]	–5.3
Nondurable goods	312,734	3.8[c]	9.6	977	1.4[c]	–17.5	9,753	12.6[c]	–3.5
Durable goods	994,591	12.1[c]	8.0	1,271	1.8[c]	22.1	1,612	2.1[c]	–15.2
Transportation and public utilities	903,306	11.0[c]	7.7	3,452	5.0[c]	13.8	5,000	6.5[c]	16.1
Wholesale trade	741,230	9.0[c]	5.8	(D)	(D)	(D)	1,156	1.5[c]	8.1
Retail trade	824,768	10.0[c]	3.3	5,062	7.4[c]	21.8	6,983	9.0[c]	9.8
Finance, insurance, and real estate	632,675	7.7[c]	1.9	(D)	(D)	(D)	2,061	2.7[c]	2.3
Services	1,946,659	23.7[c]	7.8	11,454	16.7[c]	1.6	10,649	13.8[c]	14.0
Government	1,254,666	15.3[c]	3.5	20,047	29.2[c]	11.0	21,418	27.7[c]	4.2
Federal civilian	231,144	2.8[c]	7.2	4,370	6.4[c]	10.8	2,211	2.9[c]	9.4
Military	44,912	0.5[c]	3.2	477	0.7[c]	4.4	786	1.0[c]	9.9
State and local	978,610	11.9[c]	2.7	15,200	22.1[c]	11.3	18,421	23.8[c]	3.3

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Sevier			Summit			Tooele		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	164,440	100.0[a]	3.1	250,824	100.0[a]	9.3	352,386	100.0[a]	4.8
Per capita personal income (dollars)	10,797	65.5[b]	3.6	18,122	109.9[b]	4.6	12,298	74.6[b]	4.7
Derivation of total personal income:									
Total earnings by place of work	111,963	100.0[c]	0.9	144,312	100.0[c]	13.9	284,399	100.0[c]	2.9
Less: Contributions for social insurance	7,011	6.3[c]	7.3	8,881	6.2[c]	19.4	15,281	5.4[c]	0.5
Plus: Residence adjustment	1,198	1.1[c]	46.5	61,869	42.9[c]	1.4	(6,904)	–2.4[c]	(U)
Equals: Net earnings by place of residence	106,150	64.6[a]	0.8	197,300	78.7[a]	9.4	262,214	74.4[a]	3.8
Plus: Dividends, interest, and rent	25,030	15.2[a]	8.6	35,827	14.3[a]	8.8	27,660	7.8[a]	8.6
Plus: Transfer payments	33,260	20.2[a]	6.4	17,697	7.1[a]	8.5	62,512	17.7[a]	7.7
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	82,388	73.6[c]	1.2	108,399	75.1[c]	15.5	246,618	86.7[c]	1.5
Other labor income	8,533	7.6[c]	1.4	7,878	5.5[c]	18.2	20,929	7.4[c]	16.8
Proprietors' income	21,042	18.8[c]	–0.4	28,035	19.4[c]	6.9	16,852	5.9[c]	9.0
Farm	4,092	3.7[c]	–15.6	6,250	4.3[c]	13.4	4,014	1.4[c]	28.0
Nonfarm	16,950	15.1[c]	4.1	21,785	15.1[c]	5.2	12,838	4.5[c]	4.2
Earnings by industry									
Farm	5,802	5.2[c]	–11.6	7,487	5.2[c]	10.2	4,951	1.7[c]	20.7
Nonfarm	106,161	94.8[c]	1.7	136,825	94.8[c]	14.1	279,448	98.3[c]	2.6
Private	83,200	74.3[c]	1.2	118,467	82.1[c]	15.1	96,599	34.0[c]	4.8
Agricultural services and other	200	0.2[c]	4.7	1,207	0.8[c]	1.3	466	0.2[c]	18.9
Mining	11,896	10.6[c]	5.3	4,334	3.0[c]	47.8	(D)	(D)	(D)
Construction	8,119	7.3[c]	–16.6	13,290	9.2[c]	68.2	(D)	(D)	(D)
Manufacturing	8,766	7.8[c]	–3.2	3,659	2.5[c]	15.1	29,681	10.4[c]	11.2
Nondurable goods	1,894	1.7[c]	9.7	692	0.5[c]	7.5	28,002	9.8[c]	14.6
Durable goods	6,872	6.1[c]	–6.3	2,967	2.1[c]	17.0	1,679	0.6[c]	–25.7
Transportation and public utilities	17,508	15.6[c]	0.9	7,768	5.4[c]	12.8	8,211	2.9[c]	11.7
Wholesale trade	3,934	3.5[c]	5.3	3,342	2.3[c]	72.5	661	0.2[c]	–5.2
Retail trade	12,382	11.1[c]	6.6	18,415	12.8[c]	12.5	12,869	4.5[c]	5.9
Finance, insurance, and real estate	3,499	3.1[c]	–2.5	18,039	12.5[c]	14.7	2,852	1.0[c]	–0.4
Services	16,896	15.1[c]	8.0	48,413	33.5[c]	3.6	23,396	8.2[c]	–0.2
Government	22,961	20.5[c]	3.4	18,358	12.7[c]	7.8	182,849	64.3[c]	1.5
Federal civilian	5,616	5.0[c]	1.1	1,650	1.1[c]	21.5	148,902	52.4[c]	–1.3
Military	667	0.6[c]	4.2	539	0.4[c]	4.3	9,872	3.5[c]	6.8
State and local	16,678	14.9[c]	4.2	16,169	11.2[c]	6.7	24,075	8.5[c]	20.1

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Uintah			Utah			Wasatch		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	224,881	100.0	4.3	2,425,104	100.0[a]	10.9	108,060	100.0[a]	10.3
Per capita personal income (dollars)	10,071	61.1[b]	7.0	9,993	60.6[b]	10.4	10,958	66.5[b]	8.0
Derivation of total personal income:									
Total earnings by place of work	175,279	100.0[c]	3.4	1,693,167	100.0[c]	13.9	50,348	100.0[c]	24.7
Less: Contributions for social insurance	10,466	6.0[c]	6.1	110,107	6.5[c]	19.6	3,187	6.3[c]	33.4
Plus: Residence adjustment	(1,253)	-0.7[c]	(U)	179,885	10.6[c]	4.1	28,360	56.3[c]	-0.8
Equals: Net earnings by place of residence	163,560	72.7[a]	3.7	1,762,945	72.7[a]	12.5	75,521	69.9[a]	13.5
Plus: Dividends, interest, and rent	28,149	12.5[a]	8.5	302,411	12.5[a]	8.4	15,630	14.5[a]	8.5
Plus: Transfer payments	33,172	14.8[a]	3.5	359,748	14.8[a]	5.6	16,909	15.6[a]	-0.4
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	123,311	70.4[c]	0.9	1,365,161	80.6[c]	15.1	37,658	74.8[c]	31.2
Other labor income	10,730	6.1[c]	2.8	122,083	7.2[c]	19.0	3,154	6.3[c]	40.7
Proprietors' income	41,238	23.5[c]	11.8	205,923	12.2[c]	4.3	9,536	18.9[c]	1.3
Farm	10,206	5.8[c]	37.2	11,180	0.7[c]	5.8	1,547	3.1[c]	-11.[illegible]
Nonfarm	31,032	17.7[c]	5.4	194,743	11.5[c]	4.2	7,989	15.9[c]	4.3
Earnings by industry									
Farm	11,092	6.3[c]	33.0	18,162	1.1[c]	3.0	2,597	5.2[c]	-7.4
Nonfarm	164,187	93.7[c]	1.9	1,675,005	98.9[c]	14.0	47,751	94.8[c]	27.1
Private	132,520	75.6[c]	1.9	1,419,150	83.8[c]	16.1	36,883	73.3[c]	35.0
Agricultural services and other	611	0.3[c]	13.1	5,579	0.3[c]	7.6	243	0.5[c]	2.5
Mining	33,451	19.1[c]	3.1	1,327	0.1[c]	8.1	(L)	(L)	(L)
Construction	8,154	4.7[c]	-19.1	99,048	5.8[c]	3.2	14,476	28.8[c]	121.5
Manufacturing	4,763	2.7[c]	5.3	329,029	19.4[c]	38.3	996	2.0[c]	15.4
Nondurable goods	1,012	0.6[c]	3.7	78,612	4.6[c]	46.4	344	0.7[c]	(U)
Durable goods	3,751	2.1[c]	5.7	250,417	14.8[c]	35.9	652	1.3[c]	(U)
Transportation and public utilities	22,435	12.8[c]	-3.2	73,428	4.3[c]	2.9	2,877	5.7[c]	84.3
Wholesale trade	9,366	5.3[c]	12.0	65,781	3.9[c]	54.9	1,431	2.8[c]	-46.3
Retail trade	15,976	9.1[c]	8.8	156,068	9.2[c]	8.0	5,156	10.2[c]	-3.2
Finance, insurance, and real estate	2,406	1.4[c]	-0.3	51,635	3.0[c]	1.5	898	1.8[c]	-12.2
Services	35,358	20.2[c]	4.7	637,255	37.6[c]	11.2	10,762	21.4[c]	18.6
Government	31,667	18.1[c]	1.7	255,855	15.1[c]	3.9	10,868	21.6[c]	6.0
Federal civilian	10,665	6.1[c]	12.2	22,182	1.3[c]	8.0	1,662	3.3[c]	11.9
Military	1,060	0.6[c]	4.2	10,836	0.6[c]	4.5	401	0.8[c]	4.2
State and local	19,942	11.4[c]	-3.3	222,837	13.2[c]	3.5	8,805	17.5[c]	5.1

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics Information System.

Table 1 (continued)
Personal Income and Earnings in Utah Counties by Type and Industrial Source, 1988

	Washington			Wayne			Weber		
	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88	Income/ Earnings ($1,000)	Components as Percent of Totals	Percent Change 1987–88
Income by Place of Residence									
Total personal income	425,273	100.0[a]	8.0	20,628	100.0[a]	0.6	2,133,065	100.0[a]	5.6
Per capita personal income (dollars)	9,787	59.4[b]	3.9	9,999	60.6[b]	3.1	13,319	80.8[b]	5.8
Derivation of total personal income:									
Total earnings by place of work	242,707	100.0[c]	8.8	12,112	100.0[c]	–5.1	1,316,961	100.0[c]	6.3
Less: Contributions for social insurance	16,476	6.8[c]	15.5	657	5.4[c]	–3.4	84,272	6.4[c]	10.2
Plus: Residence adjustment	12,570	5.2[c]	6.5	1,139	9.4[c]	39.1	202,614	15.4[c]	–0.9
Equals: Net earnings by place of residence	238,801	56.2[a]	8.3	12,594	61.1[a]	–2.4	1,435,303	67.3[a]	5.0
Plus: Dividends, interest, and rent	96,295	22.6[a]	8.7	3,505	17.0[a]	8.8	281,380	13.2[a]	8.7
Plus: Transfer payments	90,177	21.2[a]	6.4	4,529	22.0[a]	3.1	416,382	19.5[a]	5.4
Earnings by Place of Work									
Components of earnings									
Wage and salary disbursements	174,116	71.7[c]	10.4	7,417	61.2[c]	–10.1	1,094,288	83.1[c]	6.4
Other labor income	14,665	6.0[c]	9.5	728	6.0[c]	–5.0	102,256	7.8[c]	9.4
Proprietors' income	53,926	22.2[c]	3.8	3,967	32.8[c]	6.0	120,417	9.1[c]	3.5
Farm	2,656	1.1[c]	4.9	1,958	16.2[c]	10.7	4,145	0.3[c]	–16.6
Nonfarm	51,270	21.1[c]	3.8	2,009	16.6[c]	1.7	116,272	8.8[c]	4.4
Earnings by industry									
Farm	3,139	1.3[c]	3.5	2,166	17.9[c]	9.1	6,112	0.5[c]	–12.0
Nonfarm	239,568	98.7[c]	8.9	9,946	82.1[c]	–7.7	1,310,849	99.5[c]	6.4
Private	194,824	80.3[c]	8.5	5,454	45.0[c]	–18.4	962,232	73.1[c]	6.5
Agricultural services and other	2,580	1.1[c]	4.9	56	0.5[c]	(U)	3,075	0.2[c]	–5.5
Mining	1,187	0.5[c]	–33.6	57	0.5[c]	–27.8	2,029	0.2[c]	–16.9
Construction	30,674	12.6[c]	0.8	2,268	18.7[c]	–37.9	69,834	5.3[c]	2.9
Manufacturing	20,491	8.4[c]	10.3	586	4.8[c]	–2.8	272,034	20.7[c]	10.4
Nondurable goods	12,098	5.0[c]	8.4	(D)	(D)	(D)	91,647	7.0[c]	11.1
Durable goods	8,393	3.5[c]	13.2	(D)	(D)	(D)	180,387	13.7[c]	10.0
Transportation and public utilities	19,291	7.9[c]	21.0	487	4.0[c]	–10.5	62,465	4.7[c]	–9.5
Wholesale trade	12,196	5.0[c]	20.8	437	3.6[c]	9.0	42,537	3.2[c]	8.1
Retail trade	36,859	15.2[c]	7.9	523	4.3[c]	11.8	138,961	10.6[c]	5.9
Finance, insurance, and real estate	9,610	4.0[c]	1.3	(L)	(L)	(L)	54,048	4.1[c]	1.2
Services	61,936	25.5[c]	9.5	1,038	8.6[c]	26.6	317,249	24.1[c]	9.2
Government	44,744	18.4[c]	10.6	4,492	37.1[c]	9.7	348,617	26.5[c]	6.3
Federal civilian	8,486	3.5[c]	22.6	2,377	19.6[c]	11.1	166,840	12.7[c]	9.7
Military	1,486	0.6[c]	4.2	90	0.7[c]	4.7	12,863	1.0[c]	2.5
State and local	34,772	14.3[c]	8.3	2,025	16.7[c]	8.5	168,914	12.8[c]	3.4

[a] Income components as a percent of total personal income.
[b] Per capita personal income as a percent of U.S. average.
[c] Earnings components as a percent of total earnings.

(D) Not shown to avoid disclosure of confidential information.
(L) Less than $50,000. Data included in totals.
(U) Unable to calculate due to zero or negative data.

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Regional Economics information System.

Utah Business Statistics

UTAH DATA	Feb. 1989	Feb. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	21,544	NA	NA	NA	20,855	NA
New Corporations (no.)	338	493	45.9%	482	452	6.7%
New Car, Truck, and Motor Home Sales (no.)	4,339	NA	NA	NA	5,110	NA
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	74.00	76.50	3.4%	72.86	69.42	5.0%
Lambs (cwt)	60.20	52.70	−12.5%	59.50	60.76	−2.1%
Milk Wholesale (cwt)	12.30	13.90	13.0%	12.91	11.74	9.9%
Alfalfa Hay, Baled (per ton)	86.00	85.00	−1.2%	84.75	77.42	9.5%
Cattle Slaughtered (live weight) (thous. of lbs.)	44,779	44,693	−0.2%	48,153	46,666	3.2%
Construction						
Total Construction (thous. of dol.) 1	45,525.0	49,989.0	9.8%	79,537.6	66,059.8	20.4%
Residential	19,596.7	29,745.3	51.8%	37,440.0	33,129.5	13.0%
Nonresidential	20,082.5	10,011.1	−50.2%	25,682.9	20,829.6	23.3%
Additions, Alterations, and Conversions	5,845.7	10,232.7	75.0%	16,414.7	12,100.7	35.7%
Total Permit Construction (thous. of dol.) 2	51,264.3	57,002.4	11.2%	85,061.0	71,389.7	19.2%
Residential	20,802.6	33,127.2	59.2%	39,069.2	34,118.8	14.5%
Nonresidential	24,375.7	11,970.7	−50.9%	31,491.2	23,980.9	31.3%
Additions, Alterations, and Repairs	6,086.0	11,904.5	95.6%	14,500.6	13,290.0	9.1%
New Dwelling Units (no.)	283	395	39.6%	486	466	4.2%
Employment						
Civilian Labor Force (thous.)	759.7	788.5	3.8%	788.4	761.9	3.5%
Total Employed Persons	720.8	752.5	4.4%	755.4	726.0	4.1%
Unemployed Persons	38.9	36.0	−7.5%	33.0	35.5	−7.2%
Percent Total Labor Force	5.1	4.6	−9.8%	4.2	4.7	−11.3%
Employees on Nonagricultural Payrolls (thous. of jobs)	667.2	698.3	4.7%	693.8	664.6	4.4%
Manufacturing	100.8	103.1	2.3%	103.1	99.9	3.2%
Mining	7.6	8.3	9.2%	8.1	8.1	0.8%
Contract Construction	20.5	21.6	5.4%	26.0	25.0	3.9%
Transportation, Communication, and Utilities	40.0	41.9	4.7%	41.1	39.8	3.2%
Wholesale Trade	37.3	39.5	5.9%	38.3	36.0	6.6%
Retail Trade	120.3	128.3	6.7%	128.7	121.9	5.6%
Finance, Insurance, and Real Estate	33.1	33.5	1.2%	33.3	33.3	0.1%
Services 3	161.1	172.3	7.0%	168.5	157.6	6.9%
Federal Government	39.6	39.7	0.3%	40.2	39.4	2.0%
State Government 4	40.6	42.6	4.9%	40.5	38.8	4.3%
Local Government 4	66.5	67.5	1.5%	66.0	65.0	1.6%
Average Weekly Hours						
Manufacturing	39.5	40.3	2.0%	39.9	40.4	−1.3%
Mining	41.8	42.2	1.0%	41.2	41.2	−0.1%
Wholesale Trade	37.1	36.0	−3.0%	35.9	37.6	−4.3%
Retail Trade	26.4	25.5	−3.4%	27.1	27.8	−2.2%
Amount of Unemployment Compensation (thous. of dol.)	7,474.6	6,597.4	−11.7%	4,968.9	5,699.3	−12.8%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,243.1	1,889.9	−15.7%	2,132.1	2,363.5	−9.8%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	248,733.9	87,724.9	−64.7%	160,009.2	149,315.0	7.2%
Sales and Use Tax	129,837.1	4,547.7	−96.5%	57,591.3	54,614.9	5.4%
Motor Fuel Tax	9,947.8	10,552.5	6.1%	11,656.2	10,948.1	6.5%
Individual Income Tax	65,792.2	46,066.2	−30.0%	52,513.0	54,004.1	−2.8%
Corporation Franchise Tax	−491.0	1,352.8	−375.5%n	5,255.6	6,507.5	−19.2%
Production						
Crude Oil to Refineries (thous. of bbls.)	3,900.6	3,057.5	−21.6%	3,751.5	4,347.3	−13.7%
Crude Oil (thous. of bbls.)	2,246.5	2,219.0	−1.2%	2,341.8	2,680.4	−12.6%
Natural Gas (mil. of cu. ft.)	22,506.3	23,612.3	4.9%	23,231.1	23,017.1	0.9%
Coal (thous. short tons)	1,541.0	1,982.0	28.6%	1,778.2	1,505.1	18.1%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	870,317	926,389	6.4%	1,002,543	881,441	13.7%
Highway Traffic Count Across State Lines	29,321	42,678	45.6%	41,107	NA	NA
Transient Room Taxes (thous. of dol.)	1,225.7	537.9	−56.1%	560.6	640.6	−12.5%
Visits, State, Nat'l. Parks, Monuments (thous.)	263.9	334.3	26.7%	1,119.6	1,093.5	2.4%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	497,063	NA	NA	NA	490,260	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	184,235	NA	NA	NA	181,962	NA
Electric Customers (Residential)	483,845	488,625	1.0%	484,994	477,755	1.5%
Electric Customers (Commercial)	48,006	50,310	4.8%	48,557	47,057	3.2%
Natural Gas Customers (Residential & Commercial)	472,690	486,405	2.9%	475,564	461,927	3.2%
Natural Gas Customers (Industrial)	554	566	2.2%	567	551	2.8%

Utah Business Statistics

UTAH DATA	Feb. 1989	Feb. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	53.7r	55.7f	3.7%	55.6	53.6	3.7%
Unemployment Rate	3.8r	3.2	-15.8%	3.9	4.3	-9.4%
Auth. Permit Construction (thous. of dol.)	4,510.3	6,048.9	34.1%	10,532.9	8,996.9	17.1%
New Dwelling Units (no.)	34	53	55.9%	70	67	4.4%
Postal Receipts (thous. of dol.)	645.6	645.6	0.0%	627.5	458.8	36.8%
Electric Customers (Residential)	47,816	49,915	4.4%	49,292	48,171	2.3%
Electric Customers (Commercial)	3,574	3,736	4.5%	3,647	3,500	4.2%
Natural Gas Customers (Residential)	51,808	52,932	2.2%	52,007	50,643	2.7%
Natural Gas Customers (Industrial)	54	56	3.7%	56	53	5.4%
Telephone Lines in Service (Mt. Bell)(Residential)	56,209	NA	NA	NA	55,570	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,742	NA	NA	NA	11,459	NA
Salt Lake County						
Non-Ag. Employment (thous.)	341.7r	354.8f	3.8%	356.6	342.0	4.3%
Unemployment Rate	4.1r	3.6	-12.2%	3.8	4.4	-12.4%
Auth. Permit Construction (thous. of dol.)	31,805.0	25,234.7	-20.7%	35,845.4	31,371.4	14.3%
New Dwelling Units (no.)	130	163	25.4%	168	179	-5.6%
Postal Receipts (thous. of dol.)	8,690.3	8,372.9	-3.7%	8,210.4	8,151.8	0.7%
Electric Customers (Residential)	244,072	246,393	1.0%	243,701	240,361	1.4%
Electric Customers (Commercial)	21,020	21,288	1.3%	20,961	20,516	2.2%
Natural Gas Customers (Residential)	225,883	229,277	1.5%	225,337	221,345	1.8%
Natural Gas Customers (Industrial)	236	246	4.2%	244	237	2.8%
Telephone Lines in Service (Mt. Bell)(Residential)	233,418	NA	NA	NA	230,953	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	111,864	NA	NA	NA	111,305	NA
Utah County						
Non-Ag. Employment (thous.)	83.3r	89.6f	7.6%	86.7	82.3	5.3%
Unemployment Rate	3.5r	3.2	-8.6%	3.9	4.1	-6.1%
Auth. Permit Construction (thous. of dol.)	5,681.1	10,004.9	76.1%	12,798.5	10,709.6	19.5%
New Dwelling Units (no.)	52	57	9.6%	76	64	17.5%
Postal Receipts (thous. of dol.)	1,369.2	1,801.9	31.6%	1,498.3	1,249.5	19.9%
Electric Customers (Residential)	52,699	52,243	-0.9%	53,200	52,486	1.4%
Electric Customers (Commercial)	5,950	7,623	28.1%	6,446	5,984	7.7%
Natural Gas Customers (Residential)	63,263	64,452	1.9%	63,326	61,962	2.2%
Natural Gas Customers (Industrial)	74	72	-2.7%	73	69	6.4%
Telephone Lines in Service (Mt. Bell)(Residential)	66,447	NA	NA	NA	64,971	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	21,185	NA	NA	NA	20,391	NA
Weber County						
Non-Ag. Employment (thous.)	63.3r	64.7f	2.2%	65.1	62.5	4.1%
Unemployment Rate	5.1r	4.2	-17.6%	5.0	5.7	-13.7%
Auth. Permit Construction (thous. of dol.)	1,860.7	3,480.6	87.1%	6,460.1	5,276.8	22.4%
New Dwelling Units (no.)	14	26	85.7%	47	44	7.6%
Postal Receipts (thous. of dol.)	664.2	761.2	14.6%	701.0	680.3	3.0%
Electric Customers (Residential)	54,419	54,757	0.6%	54,333	53,641	1.3%
Electric Customers (Commercial)	4,980	5,058	1.6%	5,041	4,939	2.1%
Natural Gas Customers (Residential)	50,922	51,427	1.0%	50,702	49,936	1.5%
Natural Gas Customers (Industrial)	80	83	3.8%	84	83	1.7%
Telephone Lines in Service (Mt. Bell)(Residential)	47,049	NA	NA	NA	46,643	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,093	NA	NA	NA	12,005	NA

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
n	Not meaningful due to negative data.
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

Utah Business Statistics

UTAH DATA	Mar. 1989	Mar. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	21,544	NA	NA	NA	20,983	NA
New Corporations (no.)	528	504	-4.5%	480	450	6.6%
New Car, Truck, and Motor Home Sales (no.)	5,290	NA	NA	NA	5,107	NA
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	74.40	77.00	3.5%	73.08	69.89	4.6%
Lambs (cwt)	64.70	55.90	-13.6%	58.77	60.79	-3.3%
Milk Wholesale (cwt)	11.80	13.10	11.0%	13.02	11.77	10.6%
Alfalfa Hay, Baled (per ton)	87.00	86.00	-1.1%	84.67	78.42	8.0%
Cattle Slaughtered (live weight) (thous. of lbs.)	51,829	49,499	-4.5%	47,959	46,957	2.1%
Construction						
Total Construction (thous. of dol.) 1	91,659.6	76,479.3	-16.6%	78,272.6	67,343.4	16.2%
Residential	36,608.1	50,119.8	36.9%	38,566.0	33,157.7	16.3%
Nonresidential	37,121.0	15,446.4	-58.4%	23,876.7	21,684.5	10.1%
Additions, Alterations, and Conversions	17,930.6	10,913.1	-39.1%	15,829.9	12,501.3	26.6%
Total Permit Construction (thous. of dol.) 2	99,218.4	81,971.2	-17.4%	83,623.7	73,335.9	14.0%
Residential	39,580.1	51,004.2	28.9%	40,021.2	34,243.8	16.9%
Nonresidential	41,781.5	17,512.7	-58.1%	29,468.8	25,267.5	16.6%
Additions, Alterations, and Repairs	17,856.8	13,454.3	-24.7%	14,133.7	13,824.6	2.2%
New Dwelling Units (no.)	549	685	24.8%	497	470	5.8%
Employment						
Civilian Labor Force (thous.)	773.6	791.6	2.3%	790.6	764.2	3.5%
Total Employed Persons	727.4	750.2	3.1%	757.3	728.1	4.0%
Unemployed Persons	46.2	41.4	-10.4%	33.3	35.7	-6.7%
Percent Total Labor Force	6.0	5.2	-13.3%	4.2	4.7	-10.8%
Employees on Nonagricultural Payrolls (thous. of jobs)	676.0	708.1	4.7%	696.8	667.1	4.5%
Manufacturing	101.2	103.6	2.4%	103.3	100.4	3.0%
Mining	7.7	8.4	9.1%	8.2	8.0	2.3%
Contract Construction	22.9	23.8	3.9%	26.2	25.2	4.1%
Transportation, Communication, and Utilities	39.8	41.9	5.3%	41.3	39.9	3.4%
Wholesale Trade	37.8	39.8	5.3%	38.6	36.2	6.5%
Retail Trade	122.2	130.7	7.0%	129.5	122.3	5.9%
Finance, Insurance, and Real Estate	33.1	33.9	2.4%	33.4	33.2	0.4%
Services 3	163.9	175.4	7.0%	169.5	158.5	7.0%
Federal Government	39.8	40.0	0.5%	40.2	39.4	1.9%
State Government 4	40.4	42.2	4.5%	40.6	38.9	4.5%
Local Government 4	67.2	68.4	1.8%	66.1	65.1	1.6%
Average Weekly Hours						
Manufacturing	39.7	39.6	-0.3%	39.9	40.4	-1.2%
Mining	39.8	42.3	6.3%	41.3	40.9	1.2%
Wholesale Trade	38.7	36.3	-6.2%	35.9	37.6	-4.4%
Retail Trade	26.8	25.7	-4.1%	27.1	27.7	-2.2%
Amount of Unemployment Compensation (thous. of dol.)	7,376.5	6,608.7	-10.4%	4,904.9	5,513.5	-11.0%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,227.8	1,896.8	-14.9%	2,104.5	2,373.5	-11.3%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	54,763.9	59,267.2	8.2%	160,384.5	148,044.1	8.3%
Sales and Use Tax	2,323.9	2,636.3	13.4%	57,617.3	54,185.1	6.3%
Motor Fuel Tax	10,238.3	9,707.5	-5.2%	11,612.0	10,920.7	6.3%
Individual Income Tax	14,442.9	26,560.8	83.9%	53,522.8	52,484.2	2.0%
Corporation Franchise Tax	7,049.2	622.0	-91.2%	4,720.0	6,970.5	-32.3%
Production						
Crude Oil to Refineries (thous. of bbls.)	3,829.5	3,578.1	-6.6%	3,730.5	4,366.5	-14.6%
Crude Oil (thous. of bbls.)	2,469.4	2,401.0	-2.8%	2,336.1	2,647.5	-11.8%
Natural Gas (mil. of cu. ft.)	23,314.4	26,597.9	14.1%	23,504.7	23,071.5	1.9%
Coal (thous. short tons)	1,899.0	2,045.0	7.7%	1,790.3	1,520.3	17.8%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	1,076,602	1,091,198	1.4%	1,003,760	890,791	12.7%
Highway Traffic Count Across State Lines	36,322	42,678	17.5%	41,637	NA	NA
Transient Room Taxes (thous. of dol.)	-34.7	10.0	-128.8%	564.3	463.6	21.7%
Visits, State, Nat'l. Parks, Monuments (thous.)	607.5	557.4	-8.2%	1,115.4	1,103.6	1.1%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	497,699	NA	NA	NA	491,161	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	184,692	NA	NA	NA	182,405	NA
Electric Customers (Residential)	484,142	489,513	1.1%	485,442	478,365	1.5%
Electric Customers (Commercial)	48,023	49,142	2.3%	48,650	47,176	3.1%
Natural Gas Customers (Residential & Commercial)	474,693	487,490	2.7%	476,631	462,095	3.1%
Natural Gas Customers (Industrial)	559	565	1.1%	567	553	2.6%

Utah Business Statistics

UTAH DATA	Mar. 1989	Mar. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	54.3r	56.3f	3.7%	55.9	53.9	3.8%
Unemployment Rate	5.0r	4.0	-20.0%	4.0	4.3	-8.3%
Auth. Permit Construction (thous. of dol.)	8,239.5	10,784.7	30.9%	10,745.0	8,886.7	20.9%
New Dwelling Units (no.)	72	120	66.7%	74	66	11.2%
Postal Receipts (thous. of dol.)	574.2	687.7	19.8%	637.0	474.6	34.2%
Electric Customers (Residential)	49,201	49,930	1.5%	49,353	48,267	2.2%
Electric Customers (Commercial)	3,599	3,788	5.3%	3,663	3,518	4.1%
Natural Gas Customers (Residential)	52,029	53,017	1.9%	52,089	50,786	2.6%
Natural Gas Customers (Industrial)	55	56	1.8%	56	53	5.0%
Telephone Lines in Service (Mt. Bell)(Residential)	56,414	NA	NA	NA	55,694	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,754	NA	NA	NA	11,509	NA
Salt Lake County						
Non-Ag. Employment (thous.)	345.4r	361.0f	4.5%	357.8	342.9	4.4%
Unemployment Rate	4.9r	4.2	-14.3%	3.9	4.3	-10.6%
Auth. Permit Construction (thous. of dol.)	50,944.9	36,109.6	-29.1%	34,609.2	32,947.5	5.0%
New Dwelling Units (no.)	224	285	27.2%	174	181	-4.1%
Postal Receipts (thous. of dol.)	8,351.1	8,049.3	-3.6%	8,185.2	8,256.4	-0.9%
Electric Customers (Residential)	243,498	246,479	1.2%	243,949	240,641	1.4%
Electric Customers (Commercial)	20,947	21,186	1.1%	20,980	20,561	2.0%
Natural Gas Customers (Residential)	226,642	229,805	1.4%	225,601	221,637	1.8%
Natural Gas Customers (Industrial)	237	245	3.4%	245	238	2.9%
Telephone Lines in Service (Mt. Bell)(Residential)	233,629	NA	NA	NA	231,317	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	112,158	NA	NA	NA	111,461	NA
Utah County						
Non-Ag. Employment (thous.)	84.9r	90.6f	6.7%	87.2	82.8	5.3%
Unemployment Rate	4.5r	3.2	-28.9%	3.9	4.1	-5.1%
Auth. Permit Construction (thous. of dol.)	17,400.5	12,780.7	-26.5%	12,413.5	11,083.4	12.0%
New Dwelling Units (no.)	97	124	27.8%	78	67	15.7%
Postal Receipts (thous. of dol.)	1,415.2	1,735.5	22.6%	1,525.0	1,281.9	19.0%
Electric Customers (Residential)	52,670	53,139	0.9%	53,239	52,557	1.3%
Electric Customers (Commercial)	6,076	6,446	6.1%	6,477	5,997	8.0%
Natural Gas Customers (Residential)	63,245	64,499	2.0%	63,430	62,064	2.2%
Natural Gas Customers (Industrial)	74	73	-1.4%	73	69	5.6%
Telephone Lines in Service (Mt. Bell)(Residential)	66,507	NA	NA	NA	65,123	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	21,183	NA	NA	NA	20,513	NA
Weber County						
Non-Ag. Employment (thous.)	63.7r	65.0f	2.0%	65.2	62.8	3.9%
Unemployment Rate	6.2r	5.2	-16.1%	5.0	5.7	-12.8%
Auth. Permit Construction (thous. of dol.)	5,081.2	9,069.6	78.5%	6,792.5	5,014.0	35.5%
New Dwelling Units (no.)	46	51	10.9%	48	43	11.0%
Postal Receipts (thous. of dol.)	654.0	706.0	8.0%	705.3	685.4	2.9%
Electric Customers (Residential)	54,422	54,724	0.6%	54,358	53,716	1.2%
Electric Customers (Commercial)	5,092	5,099	0.1%	5,042	4,952	1.8%
Natural Gas Customers (Residential)	51,173	51,589	0.8%	50,736	50,027	1.4%
Natural Gas Customers (Industrial)	83	82	-1.2%	84	83	1.6%
Telephone Lines in Service (Mt. Bell)(Residential)	47,150	NA	NA	NA	46,721	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,140	NA	NA	NA	12,040	NA

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1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:	
Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	Mar. 1989	Mar. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,113.1	5,433.1	6.3%	5,314.0	4,974.0	6.8%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,360.7	4,674.8	7.2%	4,507.6	4,156.8	8.4%
Industrial Production Indexes (seasonally adjusted) (1987=100)	107.7	109.0	1.2%	108.2	106.4	1.7%
Total Non-Farm Bus. Expend. for New Plants & Equip. (bil.) (qtly.)	459.5	500.3	8.9%	485.7	441.2	10.1%
Net Exports of Goods and Services (bil.) (qtly.)	-54.0	-32.0	-40.7%	-41.6	-66.5	-37.4%
Exports of Goods and Services (bil.) (qtly.)	605.6	664.7	9.8%	640.7	568.7	12.7%
Imports of Goods and Services (bil.) (qtly.)	659.6	696.6	5.6%	682.3	635.2	7.4%
Index of Leading Indicators (1982=100)	144.7	145.2	0.3%	144.7	144.0	0.5%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	122.3	128.7	5.2%	125.6	119.7	4.9%
CPI-U (All Urban Consumers) Food & Beverages	123.3	131.2	6.4%	126.9	119.9	5.8%
CPI-U (All Urban Consumers) Housing	121.5	126.8	4.4%	124.3	119.5	4.0%
CPI-U (All Urban Consumers) Transportation	111.9	116.8	4.4%	115.5	109.9	5.1%
CPI-U (All Urban Consumers) Medical Care	146.1	158.7	8.6%	152.3	141.1	8.0%
CPI-U (All Urban Consumers) Energy	89.8	95.5	6.3%	96.1	89.9	6.9%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	112.2	117.0	4.3%	114.9	109.3	5.1%
GNP Price Deflator (1982=100) (qtly.)	124.5	129.6	4.1%	127.6	122.6	4.1%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	123.2	124.8	1.3%	124.2	122.2	1.6%
Total Civilian Employment (mil.)	117.0	118.3	1.1%	117.6	115.6	1.7%
Unemployment Rate	5.0	5.2	4.0%	5.3	5.4	-1.7%
Construction						
Total Construction (mil. of dol.)	21,945.1	20,919.3	-4.7%	20,890.7	21,695.0	-3.7%
Residential	10,506.5	9,940.0	-5.4%	9,789.6	10,191.3	-3.9%
Nonresidential	7,100.0	7,085.7	-0.2%	7,331.2	7,542.0	-2.8%
Non-Building	4,338.6	3,893.6	-10.3%	3,769.9	3,961.7	-4.8%
New Dwelling Units (no.)	119,575	108,118	-9.6%	109,378	120,972	-9.6%
Interest Rates						
Federal Funds Rate	9.85	8.28	-15.9%	8.92	8.26	7.9%
Short Term (3-month Treasury bill rate)	8.83	7.87	-10.9%	7.92	7.37	7.6%
Long Term (30-year Treasury bond yields)	9.33	8.74	-6.3%	8.44	9.12	-7.4%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	11.50	10.00	-13.0%	10.64	9.91	7.3%
Mortgage Rates (new homes)	9.63	9.70	0.7%	9.80	8.98	9.2%

Sources: *Survey of Current Business*, U.S. Department of Commerce: U.S. Gross National Product, Total National Personal Income, Industrial Production Indexes, Total Non-Farm Business Expenditures for New Plants and Equipment, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates, New Home Mortgage Rates.

F.W. Dodge Report, McGraw Hill: National Construction Data.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

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John Seybolt, *Dean, Graduate School of Business*

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RESULTS OF THE 1989-90 UTAH SKI INDUSTRY STUDY

Boyd L. Fjeldsted
Senior Research Economist

Frank C. Hachman
Associate Director

Introduction

This article presents highlights from a comprehensive study of the Utah ski industry sponsored by the Utah Ski Association, the Utah Travel Council, the Salt Lake Convention and Visitors Bureau and the Park City Area Chamber/Visitors and Convention Bureau. The study was begun by the Bureau of Economic and Business Research (BEBR) of the University of Utah in December of 1989 and consisted of two principal components: (1) a stratified sample survey of more than 1,400 Utah skiers conducted at all 14 Utah ski areas throughout the 1989-90 ski season and (2) an analysis of the impact of the Utah ski industry on the Utah economy, based in part on the results of the Utah skier survey, but supplemented with information developed from other sources.

The first part of this article presents the basic results of the Utah skier survey, which was focused to a considerable extent on the market behavior and economic and demographic characteristics of non-resident skiers, though certain behavioral aspects and economic and demographic characteristics of Utah resident skiers were probed as well. The second part of this article sets forth the results of an analysis of the impact of non-resident skiers on the Utah economy, together with an economic profile of the Utah ski industry as a whole.

In reading this article it should be kept in mind that a skier visit (or skier day) is defined as one person visiting a ski area for all or any part of a day for the purpose of skiing. From this definition, it follows that the total number of skier visits to a ski area on a given day will be equal to the total number of lift tickets issued plus the number of visits by season pass holders. Since many non-resident skiers do not ski every day during their visit to Utah, the total number of Utah visitor days accounted for by non-resident skiers during their stay in Utah will exceed their total number of skier visits.

PART I. THE 1989-90 UTAH SKIER SURVEY

Sample Design and Intercept Procedure

One of the principal goals of the 1989-90 skier survey was to estimate the proportion of total Utah skier visits accounted for by non-resident skiers with a maximum error margin of approximately 2.5 percentage points at the 95% confidence level. In order to achieve this objective, the skier survey incorporated a two-stage stratified sample design, with the total sample size of approximately 1,400 completed interviews allocated among ski areas in approximate proportion to the number of skier visits accounted for by each ski area. At the second stage the sample was temporally apportioned within each ski area in approximate proportion to skier activity accounted for on different days of the week, with special consideration given to increased activity occurring during holiday periods.

In addition, a cluster design was adopted for the purpose of cost effectiveness. Each interviewer was assigned to a ski area for either a full day or a half day, depending on the location of the ski area and the number of interviews required from the ski area for the week. Typically the cluster size was 5 or 6 completed interviews for a half-day assignment and 10 or 12 interviews for a full-day assignment. Interviews were restricted to skiers age 16 and over who were not ski area employees.

In order to achieve an acceptable response rate, intercepts took place in lift lines, with the interview usually being completed during the lift ride after the intercept. On some occasions it was possible to complete the interview in the lift line. On relatively few occasions it was necessary to complete the interview upon departing the chair lift at the top of the lift. It is worth noting at this point that the lift line intercept procedure resulted in a response rate of almost 95%, i.e., among those intercepted skiers who were eligible for inclusion in the sample only slightly more than 5% refused to be interviewed.

The sample design was self-weighting, in the sense that the sample allocation among ski areas was approximately proportional to the share of skier visits expected from each ski area on the basis of past experience. In order to generate unbiased estimates of state-wide parameters, the inference process was further refined by weighting estimates from each ski area by their actual share of skier visits during the 1989-90 ski season. In addition, for non-resident skiers, unbiased estimates of those parameters expressed on a per skier basis (rather than on a per skier visit basis) were obtained by weighting individual observations by the reciprocal of the reported number of days skied in Utah. This procedure compensates for the fact that the probability of including a particular type of non-resident skier in the sample is directly proportional to the average number of days skied in Utah by that type of skier.

In the discussion that follows, the term "respondent" or simply "skier" is used to refer to a person who answered a particular question on the survey questionnaire. If a person declined to answer a particular question, that person was not considered to be a respondent for the purpose of tabulating the results for that question.

Highlights of the Skier Survey

- Non-resident skiers accounted for 60% of total Utah skier visits for the 1989-90 ski season after weighting the results from individual ski areas by the proportion of total skier activity accounted for by each ski area.

- California alone accounted for 25% of the non-resident skier respondents, with 20% coming from other western and southwestern states, 24% coming from northeastern and central Atlantic states, and 26% from southern and central states. About 5% came from foreign countries.

- Approximately 36% of non-resident respondents were skiing in Utah for the first time; among those who were not skiing in Utah for the first time, the average number of years skied in the previous 5 years was 2.5, though 26% of these had skied in Utah every year in the previous 5 years.

- Approximately 82% of non-resident skiers listed skiing or vacation as the principal reason for being in Utah. Business and/or convention was the reason listed by 7.5%, followed by visiting family or friends at 5.8%.

- Of the non-resident skiers listing skiing as the main reason for the trip, 27.2% selected Utah because of the snow or skiing conditions, 10.7% so they could visit family or friends, 8.4% because they owned a condo or an interest in a condo, 8.1% because of past favorable experience, and 7.8% because of accessibility of the ski areas.

- Approximately 35% of non-resident skiers visited or intended to visit downtown Salt Lake City during their stay in Utah, while 43% visited or intended to visit downtown Park City. Some 15% were going to visit Temple Square, while 23% were going to visit night clubs. About 5% intended to attend professional basketball or hockey games, while 2% were going to attend the symphony, ballet or opera. About 5% planned to go snowmobiling, with just over 2.5% planning to go cross-country skiing.

- About 55% of non-resident skiers staying in the Salt Lake Valley visited or intended to visit downtown Salt Lake City, while only about 23% of those staying in Park City visited or intended to visit downtown Salt Lake. About 77% of non-resident skiers staying in Summit County visited or intended to visit downtown Park City, while less than 24% of those staying in the Salt Lake Valley visited or intended to visit downtown Park City.

- Non-resident skiers stayed an average of 5.4 nights in Utah and skied an average of 4.2 days on Utah ski slopes. These averages were calculated using appropriate weights to adjust for differential intercept probabilities. This is necessary since those non-resident skiers with long stays have a higher probability of being included in the sample than those with short stays.

- The average length of stay of non-resident skiers staying in the Salt Lake Valley was 5.4 nights, compared to 5.7 nights for those staying in Summit County. Perhaps more interesting is the fact that the average number of days skied by those staying in Salt Lake County was 3.8, while the average number of days skied by those staying in Summit County was a full day longer, viz., 4.8. Again appropriate weights were used in the calculation of these averages to adjust for differential intercept probabilities.

- Park City (including Deer Valley) was the primary lodging area for almost 38% of non-resident skiers. Other Summit County areas accounted for more than 1%, so that the total for Summit County was over 39%. Park City was followed by downtown Salt Lake, with 23% of the non-resident skiers. Other Salt Lake Valley areas, such as Sandy, Midvale and Murray, accounted for nearly 13%, so that the total for the Salt Lake Valley was 36%. In addition Snowbird and Alta, also in Salt Lake County, accounted for about 11%, so that the total for Salt Lake County was approximately 47%.

- More than 32% of non-resident skiers stayed in a rented condo or vacation home while in their primary lodging area. Almost 14% stayed in a resort hotel, while 30% stayed in some other hotel or motel for a total of almost 44% in hotels and motels. More than 13% stayed with friends or family, while almost 9% stayed in an owned condo or vacation home.

- Approximately 76% of non-resident skiers traveled to Utah by airline. Of these a weighted proportion of about 15% paid no fare, either because they were participating in a frequent flyer program or were airline employees. The appropriately weighted round-trip airfare for those purchasing tickets was approximately $360. Inclusion of those paying no fare reduced the average for all trips to approximately $305. More than 22% of non-resident skiers traveled to Utah by automobile or other private vehicle, with just under 2% traveling by bus. Another 1% traveled by private aircraft.

- About 76% of non-resident skiers staying in the Salt Lake Valley traveled to Utah by airline, while almost 90% of those staying in Summit County traveled to Utah by airline. The other side of the travel picture is that almost 20% of those staying in the Salt Lake Valley traveled to Utah by automobile, compared to only about 8% of those staying in Summit County.

- Slightly more than 48% of the non-resident skiers made use of a travel agent for their trip to Utah, while some 19% of the non-resident skiers purchased a tour package that included lodging.

- Some 32% of non-resident skiers used a private automobile some time during their stay in Utah. More than 44% used a rented automobile, while less than 2% used a taxi. Approximately 7% used the Utah Transit Authority, while some 11% used the Park City Shuttle. About 16% used some other form of ground transportation.

- Approximately 71% of the non-resident skiers indicated they were influenced by friends or family in making their decision to ski in Utah for the first time. About 15% stated that they were influenced by ski magazine advertisements, while 3% declared that they were influenced by some other kind of magazine advertisement. About 8% were influenced by ski or travel magazine articles, while 1% were influenced by newspaper articles and approximately 2% were influenced by TV news or other TV coverage. Somewhat less than 3% said they were influenced by travel agent recommendations.

- Some 14% of non-residents had used the Utah Ski Planner in planning their trip to Utah. More than 24% had used the Salt Lake City Visitor Guide or the Park City Vacation Planner either in planning their trip or during their visit to Utah.

- The average size of group of non-residents traveling together to Utah (including single persons) was 2.4. The average number of skiers in the group was 2.2, implying that the average number of non-skiers in the group was only 0.2 of a person. The average number of skiers under the age of 16 in the group was 0.5. These averages were calculated using appropriate weights to compensate for differential intercept probabilities for skiers from large groups as opposed to skiers from small groups.

- For those groups staying in the Salt Lake Valley the average group size was 2.0, including 1.9 skiers (of whom 0.4 were under the age of 16). For groups staying in Summit County the average group size was 2.9, including 2.8 skiers (of whom 0.6 were under the age of 16). Again these averages were calculated using appropriate weights to compensate for differential intercept probabilities.

- On a scale of 1 to 5 the average rating given Utah skiing by all respondents, both resident and non-resident, was 4.7. More than 72% gave Utah the highest possible rating of 5.

- Approximately 67% of respondents, both resident and non-resident, who expressed either a like or a dislike about Utah or Utah's skiing mentioned snow and skiing conditions as being among the things they liked best. About 23% mentioned Utah's terrain variety as one of the things they liked best. And about 21% listed the accessibility of Utah's ski areas as one of the things they liked best about Utah or Utah's skiing.

- Approximately 24% of respondents, both resident and non-resident, who expressed either a like or a dislike about Utah or Utah's skiing mentioned Utah's liquor laws as being among the things they disliked most, while some 20% alluded to crowded lifts or slow lifts. Only 16% of non-residents mentioned crowded lifts or slow lift lines, compared to 26% of residents. About 12% listed high prices as being among the things they disliked most about Utah or Utah's skiing. Only 9% of non-residents mentioned high prices, compared to 16% of residents.

- Only persons 16 years of age or older were included in the sample. The average age of respondents within this restricted age group was 34.6. The average age at which they learned to ski was 18.7. Approximately 6% were taking ski lessons at the time of their visit.

- About 6% of all respondents had not graduated from high school. High school graduation was the highest education level for 11%, some college was the highest education level for 26%, college graduation was the highest level for 32% and graduate work was the highest education level for 25%.

- The average household size for all respondents was 2.9, with an average of 1.0 dependent children. The mean household income of all respondents was almost $70,000, with the mean household income of Utah resident skiers being $40,100 and the mean household income of non-resident skiers being $97,500. Less than half of 1% of resident skiers had household incomes greater than $200,000, while 13% of non-resident skiers claimed to have household incomes greater than $200,000.

- About 23% of non-resident skiers staying in the Salt Lake Valley stayed with family or friends, compared to only 6% of those staying in Summit County. This may be related to the fact more than 26% of those staying in the Salt Lake Valley reported a household incomes of less than $40,000, compared to only 13% of those staying in Summit County. Or perhaps to the fact that nearly 40% of the non-resident skiers staying in Summit County reported a household income of more than $100,000, compared to only 21% for those staying in the Salt Lake Valley.

PART II. ECONOMIC SIGNIFICANCE OF THE UTAH SKI INDUSTRY

Profile of the Utah Ski Industry

There are various ways of defining the Utah ski industry, including the broad notion of including every business enterprise in Utah that sells (or rents) ski equipment, ski apparel, access to ski runs, ski instruction, and food and lodging to skiers while they are visiting a ski area, and other non-skiing items to non-resident skiers while they are in Utah for the purpose of skiing. This definition could be enlarged to include businesses that sell skiing-related equipment or services to firms that sell to skiers. But the heart of any definition would have to include the 14 ski areas that provide access to Utah's renowned ski runs.

These ski areas range from Beaver Mountain in the north to Elk Meadows and Brian Head in southern Utah. In between are the Ogden Valley ski areas: Nordic Valley, Powder Mountain and Snow Basin; the Summit County ski areas: Deer Valley, Park City and ParkWest; the Salt Lake County ski areas: Alta, Brighton, Solitude and Snowbird; and the Utah County ski area: Sundance. These 14 ski areas provide a tremendous variety, not only with respect to geography, scenery and terrain, but also with respect to the types of skiing experiences to be had.

As part of this study the Bureau of Economic and Business Research conducted a financial survey of the 14 Utah ski areas in order to be able to characterize their direct sales to skiers and their direct purchases from Utah vendors. Since the 1989-90 ski season was not yet over with when the survey began, the ski areas were requested to provide information for the 1988-89 ski season. All but one of the ski areas elected to participate in the survey, though not all of the 13 remaining ski areas provided information on every item requested in the survey. However, on the basis of other information, BEBR was able to impute values for the missing ski area and for the missing items.

The results of the survey aggregated over all ski areas for the 1988-89 ski season may be summarized as follows: lift pass revenue, $44.9 million; equipment rental revenue, $2.1 million; ski school revenue, $7.6 million; food and beverage revenue, $20.0 million; lodging revenue, $12.2 million; and other revenue, $7.4 million. With respect to purchases from Utah sources, the 14 Utah ski areas showed the following: labor costs, $31.4 million; electric power, $3.9 million; natural gas, $0.8 million; other fuels, $1.2 million; insurance, $3.0 million; advertising, $3.0 million; food and beverages, $6.9 million; engineering and construction, $5.8 million; and other Utah purchases, $7.8 million. These numbers show a significant direct impact on other sectors of the Utah economy by the Utah ski industry.

Taken altogether these aggregate revenue numbers and aggregate Utah purchases numbers provide a fairly accurate portrayal of that segment of the industry that provides access to the ski slopes. But the ski areas constitute only a part of the total Utah ski industry picture. Moreover, except in the categories of lift passes and ski instruction, skier purchases from other Utah businesses far exceed the purchases made from the ski areas themselves.

In addition to the ski areas there are more than 500 other Utah business firms that have been identified as making significant sales to skiers for the purpose of facilitating or enhancing the skiing experience. An attempt was made to survey these businesses in order to come up with an estimate of total expenditures in Utah of skiers made for the purpose of skiing. However, the response rate on this survey was so low (only about 15%) that it was not considered worthwhile to report the results of the survey. Obviously, though, the ski areas themselves constitute only part of the Utah ski industry picture.

Export Base Analysis and the Utah Ski Industry

For the purpose of this article the actual measurement of the total economic impact of the Utah ski industry (including indirect and induced effects) will be limited to the impact of non-resident skier expenditures on the Utah economy as estimated from the results of the 1989-90 Utah skier survey. Actually though, there is a very sound economic reason for focusing on the impact of non-resident expenditures, since there is a significant distinction to be made between the effects of spending by resident and non-resident skiers. In terms of regional export base analysis visiting out-of-state skiers constitute a portion of Utah's export base. The economic effect of their expenditures in Utah is similar to the effect of a Utah manufacturing firm exporting integrated circuits to New Jersey or a mining firm exporting ore to California. In each case the export activity results in new dollars being injected into the Utah economy, with a consequent multiplier effect on the earnings and employment of Utah workers.

On the other hand, the Utah skiing industry should be given credit for the extent to which Utah residents would be skiing in other states, except for the existence of Utah skiing with all of its desirable attributes. In terms of regional export base analysis this phenomenon is referred to as import substitution. Unfortunately, the extent to which Utah resident skiers are substituting Utah skiing for out-of-state skiing is not easily determinable. For this reason the study has concentrated on the economic impact of non-resident skiers, though the economic surplus enjoyed by Utah residents by virtue of the existence of the Utah ski industry with all of its present amenities, is, no doubt, very substantial. This much can be inferred from the ratings of Utah skiing and the laudatory comments expressed by Utah resident skiers in the 1989-90 skier survey.

Non-resident Skier Economic Impact Highlights

- Non-resident skiers accounted for 60 percent or approximately 1.5 million of the 2.5 million skier visits to Utah ski areas during the 1989-90 ski season, with an average estimated expenditure during their entire stay in Utah of approximately $145 per person per day.

- Non-resident skiers accounted for more than 250,000 round-trip airline flights to Utah with an average round-trip fare of approximately $360 for paid tickets. Approximately 15% of the total trips were made under frequent flyer programs or by airline employees, resulting in an average fare for all trips of approximately $305.

- These out-of-state skiers spent approximately $340 million for their Utah skiing vacations, including an estimated $80 million for travel to Utah and an estimated $260 million while staying in Utah.

- The $260 million spent in Utah included an estimated $34.5 million for lift passes; $6.5 million for ski equipment rentals; $6.7 million for ski lessons; $91.2 million for lodging; $45.0 million for restaurant meals; $17.2 million for other food and beverages; $18.3 million for ski equipment and apparel; $4.8 million for other apparel and footwear; $11.3 million for jewelry, souvenirs, gifts and other retail purchases; $1.9 million for entertainment and amusement other than skiing; $13.1 million for automobile rental; $3.9 million for gasoline and automobile maintenance; and $6.6 million for other transportation costs, other services and other miscellaneous expenditures.

- Direct Utah excise tax collections attributable to non-resident skier expenditures in Utah (including sales tax, room tax, and gasoline tax collections) were estimated to be almost $20 million for the 1989-90 ski season.

- Non-resident skier expenditures generated an estimated $160 million in personal income for Utah wage earners and proprietors (taking into account direct, indirect and induced effects); and generated approximately 13,000 year-round equivalent jobs (full and part time) for Utah workers.

Non-resident Skier Economic Impact Analysis

The total impact of non-resident skiers on the Utah economy was inferred by means of a 531-sector input-output model of the Utah economy developed by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. This model is a member of the RIMS II class of economic models, whose characteristics and applicability are documented in two BEA publications.[1] In effect this model allows the flow of non-resident skier expenditures to be traced throughout the Utah economy, and the total amount of output from each industrial sector to be estimated. The model takes into account not only the direct requirements from each sector the non-resident skiers make purchases from, but also the indirect requirements that are imposed because those sectors must make purchases from other sectors to satisfy the direct requirements, and also the induced requirements imposed on the economy because the workers in each of the sectors directly or indirectly impacted will be making purchases from those and still other sectors in the economy out of the income they receive for providing labor services.

Table 1 on page 9 sets forth the framework for the calculation of the non-resident skier impact on the Utah economy. The numbers in the non-resident expenditures column were generally derived by expanding the mean expenditures per skier visit (i.e., per skier day) calculated from the 1989-90 skier survey. In the case of air transportation expenditures, the number of non-resident trips taken by airline was estimated by dividing the total number of skier visits accounted for by airline travelers (approximately 76% of total non-resident skier visits) by the average number of days skied by those traveling by airline. The estimated total number of trips taken by airline was then multiplied by the mean airfare reported by non-resident skiers to arrive at the estimated total air transportation expenditures of non-resident skiers.

For most other expenditure categories the total number of non-resident skier visits accounted for by skiers age 16 and over was estimated by multiplying the estimated total non-resident skier visits by the estimated proportion of non-resident skiers age 16 and over. The estimated total number of non-resident skier visits accounted for by skiers age 16 and over was then multiplied by the mean expenditure per skier visit for skiers age 16 and over. This procedure implicitly assumes that all non-resident expenditures were accounted for by non-resident skiers age 16 and over, i.e., that older skiers (parents and older relatives, for example) reported expenditures made on behalf of the younger skiers, who were not interviewed.

In the case of lodging, the mean expenditure per skier visit was first multiplied by the ratio of average number of nights spent in Utah to average number of days skied, before multiplying by the estimated total number of non-resident skier days to reflect the fact that the average number of nights spent in Utah exceeded the average number of skier days. Estimated ski lift expenditures were constrained to reflect the actual structure of resort-specific lift pass prices available to non-resident skiers. A similar adjustment was made in the case of ski lesson expenditures.

The trade and transportation margin percentages shown in the wholesale margin, retail margin and freight margin columns of Table 1 were derived from a table obtained from the Interindustry Economics Division of the Bureau of Economic Analysis entitled "Table B.--Detailed Input-Output Commodity Composition of Personal Consumption Expenditures, 1977," which is an expanded version of a Table B that was published in the May 1984 issue of the *Survey of Current Business*.[2] These margin percentages were multiplied by the numbers shown in the non-resident expenditures column to obtain the Utah trade and transportation requirements shown in the wholesale requirement, retail requirement and freight requirement columns, respectively. These requirements have been aggregated to obtain the totals shown as the final number in each of those columns.

The entries in the production requirement column represent the estimated value of the output of Utah firms directly required to support the level of expenditures shown in the non-resident expenditures column. In most cases the entry in the production requirement column is obtained by subtracting estimated excise taxes from the corresponding entries in the non-resident expenditures column. In the cases of lodging (room only) and automobile rental, the survey mean expenditure values were presumably exclusive of excise taxes, so that the corresponding entries in the two columns are the same. That is also true in the case of ski lessons and other services, since most services are exempt from the state sales tax. In the case of air transportation the 8% federal excise tax was first deducted, then an allowance for airline overhead was deducted, after which half of the remainder was allocated as the production requirement for Utah.

For those expenditures involving retail trade purchases, it was assumed that except for non-restaurant food and beverages and for gasoline and oil, the only direct Utah production requirements were the retail trade margin requirements, wholesale trade margin requirements and freight margin requirements. In the case of non-restaurant food and beverages, it was assumed that there was an additional direct production requirement from the Utah food and beverage processing sectors, based on the estimated percent of total Utah processed food and beverage consumption produced in Utah. The same approach was used to estimate the additional Utah refined petroleum requirement using data provided by the Utah Energy Office. Finally, half of the derived freight requirement was allocated as a production requirement from the Utah freight transportation sectors.

The entries in the total income coefficient column were generally taken directly from the 531-sector BEA input-output model of the Utah economy. In some cases the coefficients in the model were averaged over several Input-Output model sectors because the expenditure category was broader than the sectors of the model. The entries in the total income generated column were derived by simply taking the product of the entries in the production requirement and total income coefficient columns. The sum of the entries in the total income generated column reflect the total estimated Utah wage and salary and proprietors' income generated by non-resident skier expenditures—taking into account the indirect and induced effects of the non-resident expenditures, as well as the direct effect.

The entries in the penultimate column of Table 1 were also derived from coefficients in the 531-sector BEA input-output model, again using averaging as appropriate. It was also necessary to adjust the model coefficients downward to account for price inflation between 1986 and 1990, since the amount of labor that can be purchased by a given amount of dollars will vary directly with the value of the dollar. The numbers in this column are shown in scientific notation in order to avoid the large number of leading zeros after the decimal point.

Finally, the entries in the final or total jobs generated column of Table 1 were obtained by multiplying the entries in the production requirement column by the respective entries in the total jobs coefficient column. The sum of the entries in the total jobs generated column represents the estimated total number of year-round full and part-time jobs generated in the Utah economy by non-resident skier expenditures—again taking into account indirect and induced effects, as well as the direct effects of the non-resident expenditures.

The result of this input-output analysis of the effects of non-resident skier expenditures is to come up with a bottom line, in which there is no double counting, and which represents a true measure of the economic benefit conferred on Utah residents as a consequence of sales made by Utah businesses to non-resident skiers. The bottom line is that non-resident skier expenditures generate an estimated 13,000 year-round full and part-time jobs in the Utah economy and that these workers receive an estimated $160 million in personal income for their efforts.

Endnotes

1. See *Regional Multipliers: A User Handbook for the Regional Input-Output Modeling System (RIMS II)* (U.S. Department of Commerce, Bureau of Economic Analysis, May 1986) and *Regional Input-Output Modeling System (RIMS II): Estimation, Evaluation, and Application of a Disaggregated Regional Impact Model* (U.S. Department of Commerce, Bureau of Economic Analysis, 1981).

2. See "Input-Output Structure of the U.S. Economy, 1977," *Survey of Current Business*, Vol. 64, No. 5 (May 1984). The relevant table is entitled "Table B.--Input-Output Commodity Composition of Personal Consumption Expenditures, in Producers' and Purchasers' Prices, 1977" and appears on pages 46-48.

TABLE 1

CALCULATION OF UTAH NON-RESIDENT SKIER TOTAL ECONOMIC IMPACT DURING THE 1989-90 SKI SEASON

Expenditure Category	Non-resident Expenditures	Wholesale Margin	Retail Margin	Freight Margin	Wholesale Requirement	Retail Requirement	Freight Requirement	Production Requirement	Total Income Coefficient	Total Income Generated	Total Jobs Coefficient	Total Jobs Generated
Air Transportation	76,634,702							$29,167,310	0.5735	$16,727,452	2.44E-05	712
Ski Lift Passes	34,486,880							32,306,211	0.6197	20,020,159	4.98E-05	1,610
Ski Equipment Rentals	6,515,920							6,118,235	0.5170	3,163,127	3.01E-05	184
Ski Lessons	6,745,517							6,745,517	0.8683	5,857,133	4.94E-05	333
Lodging, Room Only	87,006,055							87,006,055	0.6433	55,970,995	5.11E-05	4,448
Lodging Incidentals	4,236,471							3,977,907	0.6433	2,558,988	5.11E-05	203
Restaurants	44,995,933							42,249,702	0.6019	25,430,096	5.60E-05	2,366
Other Food & Beverages	17,159,985	9.91%	22.78%	2.40%	1,700,555	3,909,045	411,840	1,670,782	0.4139	691,537	2.86E-05	48
Ski Equipment & Apparel	18,306,791	7.59%	30.10%	0.70%	1,389,485	5,510,344	128,148					
Other Apparel & Footwear	4,818,806	3.79%	44.76%	0.30%	182,633	2,156,897	14,456					
Jewelry, Souvenirs, Gifts	9,744,789	12.14%	36.37%	0.10%	1,183,017	3,544,180	9,745					
Other Retail Purchases	1,597,975	14.10%	26.80%	1.00%	225,314	428,257	15,980					
Entertainment & Amusement	1,876,893							1,762,341	0.6863	1,209,495	5.40E-05	95
Automobile Rental	13,101,761							13,101,761	0.4500	5,895,793	2.48E-05	325
Gasoline & Oil	3,929,610	15.26%	15.17%	2.20%	599,658	596,122	86,451	1,395,168	0.1787	249,317	7.53E-06	11
Other Transportation Costs	2,013,673							1,888,113	0.7790	1,470,840	3.23E-05	61
Other Services	2,011,887							2,011,887	0.8140	1,637,575	7.07E-05	142
Other Miscellaneous	2,609,915							2,450,625	0.5789	1,418,735	4.18E-05	102
Total Wholesale Requirement					5,280,663			5,280,663	0.6698	3,536,988	3.04E-04	1,605
Total Retail Requirement						16,144,845		16,144,845	0.7779	12,559,075	5.18E-05	836
Total Freight Requirement							666,620	333,310	0.8118	270,581	3.47E-05	12
TOTALS	$337,793,564							$253,610,432		$158,667,884		13,093

Source: Estimated by BEBR on the basis of data obtained from the BEBR 1989-90 Utah Skier Survey in conjunction with input-output model coefficients inferred from a RIMS II 531-sector model of the Utah economy developed by the U.S. Department of Commerce, Bureau of Economic Analysis (based upon 1986 regional data).

Utah Business Statistics

UTAH DATA	Apr. 1989	Apr. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	22,061	NA	NA	NA	21,113	NA
New Corporations (no.)	468	501	7.1%	483	450	7.4%
New Car, Truck, and Motor Home Sales (no.)	5,815	NA	NA	NA	5,125	NA
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	72.90	78.60	7.8%	73.55	70.08	5.0%
Lambs (cwt)	59.60	51.30	-13.9%	58.08	60.60	-4.2%
Milk Wholesale (cwt)	11.40	12.50	9.6%	13.11	11.78	11.2%
Alfalfa Hay, Baled (per ton)	85.00	86.00	1.2%	84.75	79.33	6.8%
Cattle Slaughtered (live weight) (thous. of lbs.)	43,532	43,627	0.2%	47,967	46,757	2.6%
Construction						
Total Construction (thous. of dol.) 1	86,854.2	87,542.2	0.8%	78,329.9	68,515.4	14.3%
Residential	39,593.7	45,966.6	16.1%	39,097.1	33,392.4	17.1%
Nonresidential	30,211.6	25,462.8	-15.7%	23,481.0	22,281.0	5.4%
Additions, Alterations, and Conversions	17,048.9	16,112.7	-5.5%	15,751.9	12,842.0	22.7%
Total Permit Construction (thous. of dol.) 2	94,589.0	107,480.3	13.6%	84,698.0	74,017.8	14.4%
Residential	44,850.1	49,810.4	11.1%	40,434.6	34,927.8	15.8%
Nonresidential	32,561.4	38,370.2	17.8%	29,952.9	25,152.2	19.1%
Additions, Alterations, and Repairs	17,177.5	19,299.7	12.4%	14,310.5	13,937.7	2.7%
New Dwelling Units (no.)	544	631	16.0%	505	472	7.0%
Employment						
Civilian Labor Force (thous.)	777.5	787.2	1.2%	792.4	767.1	3.3%
Total Employed Persons	733.7	745.9	1.7%	758.7	730.8	3.8%
Unemployed Persons	43.8	41.3	-5.7%	33.7	36.0	-6.4%
Percent Total Labor Force	5.6	5.2	-7.1%	4.3	4.7	-10.2%
Employees on Nonagricultural Payrolls (thous. of jobs)	683.5	715.3	4.7%	699.9	669.8	4.5%
Manufacturing	101.3	104.5	3.2%	103.6	100.7	2.9%
Mining	7.8	8.6	10.3%	8.3	8.0	3.9%
Contract Construction	24.8	25.5	2.8%	26.3	25.3	4.2%
Transportation, Communication, and Utilities	40.2	42.4	5.5%	41.6	40.1	3.6%
Wholesale Trade	37.8	39.9	5.6%	38.8	36.5	6.3%
Retail Trade	123.5	131.6	6.6%	130.2	122.8	6.0%
Finance, Insurance, and Real Estate	33.2	33.8	1.8%	33.4	33.2	0.5%
Services 3	165.7	177.1	6.9%	170.6	159.4	7.0%
Federal Government	40.6	41.1	1.2%	40.2	39.5	1.7%
State Government 4	40.6	42.4	4.4%	40.8	39.0	4.6%
Local Government 4	67.9	68.7	1.2%	66.2	65.2	1.5%
Average Weekly Hours						
Manufacturing	39.9	39.2	-1.8%	39.9	40.4	-1.2%
Mining	41.2	42.8	3.9%	41.5	40.6	2.2%
Wholesale Trade	38.4	37.9	-1.3%	36.1	37.6	-4.1%
Retail Trade	27.2	26.6	-2.2%	27.0	27.6	-1.9%
Amount of Unemployment Compensation (thous. of dol.)	5,164.4	5,334.5	3.3%	4,919.0	5,421.1	-9.3%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,191.7	1,856.5	-15.3%	2,076.5	2,351.0	-11.7%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	167,403.7	385,489.7	130.3%	178,558.3	149,602.3	19.4%
Sales and Use Tax	19,201.4	158,215.0	724.0%	69,201.8	54,799.2	26.3%
Motor Fuel Tax	9,186.4	10,488.1	14.2%	11,720.5	10,984.5	6.7%
Individual Income Tax	99,278.0	129,618.7	30.6%	56,051.2	52,850.6	6.1%
Corporation Franchise Tax	23,114.6	21,954.8	-5.0%	4,623.4	7,398.9	-37.5%
Production						
Crude Oil to Refineries (thous. of bbls.)	4,460.5	3,414.8	-23.4%	3,643.4	4,387.2	-17.0%
Crude Oil (thous. of bbls.)	2,293.4	2,285.4	-0.3%	2,335.4	2,602.9	-10.3%
Natural Gas (mil. of cu. ft.)	21,410.4	23,773.5	11.0%	23,701.7	22,996.8	3.1%
Coal (thous. short tons)	1,525.0	1,899.0	24.5%	1,821.5	1,527.3	19.3%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	879,527	887,484	0.9%	1,004,423	899,653	11.6%
Highway Traffic Count Across State Lines	38,156	NA	NA	NA	NA	NA
Transient Room Taxes (thous. of dol.)	189.7	1,036.3	446.3%	634.9	595.9	6.5%
Visits, State, Nat'l. Parks, Monuments (thous.)	925.2	1,051.6	13.7%	1,126.0	1,102.3	2.1%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	498,357	NA	NA	NA	492,065	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	185,010	NA	NA	NA	182,852	NA
Electric Customers (Residential)	482,084	489,155	1.5%	486,031	478,875	1.5%
Electric Customers (Commercial)	47,898	49,872	4.1%	48,815	47,287	3.2%
Natural Gas Customers (Residential & Commercial)	473,794	487,876	3.0%	477,804	463,050	3.2%
Natural Gas Customers (Industrial)	567	569	0.4%	567	554	2.3%

Utah Business Statistics

UTAH DATA	Apr. 1989	Apr. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	55.4r	58.1f	4.9%	56.3	54.2	3.9%
Unemployment Rate	4.4r	4.1	-6.8%	4.0	4.3	-7.9%
Auth. Permit Construction (thous. of dol.)	11,978.5	9,944.8	-17.0%	10,575.5	8,449.6	25.2%
New Dwelling Units (no.)	76	88	15.8%	75	65	14.3%
Postal Receipts (thous. of dol.)	488.5	560.4	14.7%	643.0	477.3	34.7%
Electric Customers (Residential)	48,998	49,741	1.5%	49,414	48,355	2.2%
Electric Customers (Commercial)	3,786	3,636	-4.0%	3,650	3,549	2.8%
Natural Gas Customers (Residential)	51,777	53,073	2.5%	52,197	50,907	2.5%
Natural Gas Customers (Industrial)	56	56	0.0%	56	54	4.4%
Telephone Lines in Service (Mt. Bell)(Residential)	56,617	NA	NA	NA	55,818	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,825	NA	NA	NA	11,560	NA
Salt Lake County						
Non-Ag. Employment (thous.)	348.7r	363.5f	4.2%	359.1	343.9	4.4%
Unemployment Rate	4.9r	4.3	-12.2%	3.9	4.3	-11.0%
Auth. Permit Construction (thous. of dol.)	33,800.4	46,623.7	37.9%	35,677.8	32,142.0	11.0%
New Dwelling Units (no.)	195	276	41.5%	180	181	-0.5%
Postal Receipts (thous. of dol.)	8,744.7	8,012.6	-8.4%	8,124.2	8,304.2	-2.2%
Electric Customers (Residential)	242,424	245,843	1.4%	244,234	240,900	1.4%
Electric Customers (Commercial)	20,835	21,169	1.6%	21,008	20,599	2.0%
Natural Gas Customers (Residential)	225,738	229,399	1.6%	225,906	221,890	1.8%
Natural Gas Customers (Industrial)	241	244	1.2%	245	238	2.9%
Telephone Lines in Service (Mt. Bell)(Residential)	234,075	NA	NA	NA	231,682	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	112,129	NA	NA	NA	111,611	NA
Utah County						
Non-Ag. Employment (thous.)	86.0r	91.5f	6.4%	87.8	83.3	5.3%
Unemployment Rate	4.5r	3.7	-17.8%	3.8	4.1	-6.1%
Auth. Permit Construction (thous. of dol.)	16,592.2	17,311.7	4.3%	12,473.5	11,877.8	5.0%
New Dwelling Units (no.)	77	89	15.6%	79	69	14.5%
Postal Receipts (thous. of dol.)	1,373.0	1,863.2	35.7%	1,565.8	1,297.0	20.7%
Electric Customers (Residential)	52,701	53,448	1.4%	53,301	52,613	1.3%
Electric Customers (Commercial)	5,907	7,284	23.3%	6,592	5,995	9.9%
Natural Gas Customers (Residential)	63,711	64,886	1.8%	63,528	62,145	2.2%
Natural Gas Customers (Industrial)	74	74	0.0%	73	70	4.9%
Telephone Lines in Service (Mt. Bell)(Residential)	66,471	NA	NA	NA	65,271	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	21,258	NA	NA	NA	20,635	NA
Weber County						
Non-Ag. Employment (thous.)	64.6r	67.3f	4.2%	65.5	63.0	4.0%
Unemployment Rate	5.3r	5.1	-3.8%	5.0	5.7	-11.2%
Auth. Permit Construction (thous. of dol.)	8,803.3	4,739.3	-46.2%	6,453.8	5,237.6	23.2%
New Dwelling Units (no.)	77	34	-55.8%	44	44	0.4%
Postal Receipts (thous. of dol.)	733.2	691.9	-5.6%	701.9	686.3	2.3%
Electric Customers (Residential)	54,240	54,752	0.9%	54,401	53,778	1.2%
Electric Customers (Commercial)	5,056	5,135	1.6%	5,048	4,963	1.7%
Natural Gas Customers (Residential)	50,761	51,688	1.8%	50,813	50,078	1.5%
Natural Gas Customers (Industrial)	86	83	-3.5%	84	83	1.0%
Telephone Lines in Service (Mt. Bell)(Residential)	47,267	NA	NA	NA	46,795	NA
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,200	NA	NA	NA	12,075	NA

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	Apr. 1989	Apr. 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,174.0	5,451.6	5.4%	5,292.5	4,993.7	6.0%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,387.1	4,686.8	6.8%	4,532.5	4,188.4	8.2%
Industrial Production Indexes (seasonally adjusted) (1987=100)	108.6	109.0	0.4%	108.3	106.7	1.4%
New Plant and Equipment Expenditures by Business (bil.) (qtly.)	470.9	500.3	6.2%	488.2	444.8	9.8%
Net Exports of Goods and Services (bil.) (qtly.)	-50.6	NA	NA	NA	-64.5	NA
Exports of Goods and Services (bil.) (qtly.)	626.1	NA	NA	NA	576.5	NA
Imports of Goods and Services (bil.) (qtly.)	676.6	NA	NA	NA	640.9	NA
Index of Leading Indicators (1982=100)	145.8	145.1	-0.5%	144.7	144.3	0.2%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	123.1	128.9	4.7%	126.0	120.2	4.9%
CPI-U (All Urban Consumers) Food & Beverages	124.0	131.0	5.6%	127.5	120.5	5.8%
CPI-U (All Urban Consumers) Housing	121.6	126.8	4.3%	124.7	119.9	4.0%
CPI-U (All Urban Consumers) Transportation	114.6	117.3	2.4%	115.7	110.5	4.7%
CPI-U (All Urban Consumers) Medical Care	146.8	159.8	8.9%	153.4	141.9	8.1%
CPI-U (All Urban Consumers) Energy	94.9	95.7	0.8%	96.1	90.5	6.2%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	113.0	117.0	3.5%	115.2	109.9	4.9%
GNP Price Deflator (1982=100) (qtly.)	125.9	129.6	2.9%	127.9	123.0	4.0%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	123.6	124.9	1.1%	124.3	122.4	1.5%
Total Civilian Employment (mil.)	117.1	118.1	0.9%	117.7	115.8	1.6%
Unemployment Rate	5.3	5.4	1.9%	5.3	5.4	-1.2%
Construction						
Total Construction (mil. of dol.)	24,134.4	20,160.2	-16.5%	20,760.3	21,844.2	-5.0%
Residential	11,466.0	9,721.7	-15.2%	9,683.2	10,256.9	-5.6%
Nonresidential	7,482.3	6,380.9	-14.7%	7,320.5	7,590.1	-3.6%
Non-Building	5,186.1	4,057.6	-21.8%	3,756.6	3,997.2	-6.0%
New Dwelling Units (no.)	131,488	106,781	-18.8%	107,724	120,947	-10.9%
Interest Rates						
Federal Funds Rate	9.84	8.26	-16.1%	8.79	8.51	3.2%
Short Term (3-month Treasury bill rate)	8.70	7.78	-10.6%	7.85	7.60	3.3%
Long Term (30-year Treasury bond yields)	9.18	8.92	-2.8%	8.42	9.14	-7.9%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	11.50	10.00	-13.0%	10.51	10.16	3.5%
Mortgage Rates (new homes)	9.88	9.83	-0.5%	9.80	9.08	8.0%

Sources: *Survey of Current Business*, U.S. Department of Commerce: U.S. Gross National Product, Total Personal Income, Industrial Production Indexes, New Plant and Equipment Expenditures by Business, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

F.W. Dodge Report, McGraw-Hill: National Construction Data.

Utah Labor Market Report, Utah Department of Employment Security: Consumer Price Indexes, Producer Price Index.

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IS THE BLOOM OFF UTAH'S HIGH TECH ROSE?

Jan Crispin-Little
Senior Research Analyst

INTRODUCTION

During much of the 1980s, the creation of high technology companies has been a critical element of economic development strategies nationwide. While much has been written about the high tech regions of Silicon Valley in California and Route 128 in Massachusetts, little is known about the influence and importance of high tech companies on the economies of less recognized areas. In 1986, the Bureau of Economic and Business Research (BEBR) at the University of Utah, began an extensive, multi-phase study of Utah-based high technology ventures. In addition to conducting an annual survey of high tech companies, historical case studies were completed on both well-established and emerging high technology ventures. The objectives of the study were to identify the players, determine their importance in the state's economic picture, and describe the strategic issues facing technology venture managers. This effort has been sometimes difficult, but always rewarding. A synopsis of the findings from this four-year study is presented here.

The survey was initially sent to more than 700 companies located throughout the state. To qualify as a high tech venture, a company had to meet criteria set forth by the Bureau of Labor Statistics. This definition closely parallels those developed by the Brookings Institution and a research group at the University of California at Berkeley. These groups define high technology as:

> ...companies with a proportion of technology-oriented workers greater than the average for all manufacturing industries, or 6.3%; and a ratio of Research and Development (R&D) expenditures to sales about the same as the average for all industries, or 3.1%.

This article is one of a series on the high technology sector of Utah's economy. Financial support for this research was provided by the Centers of Excellence, Department of Community and Economic Development, and the University of Utah. This support is gratefully acknowledged. Special recognition goes to Gary Ricks, a research analyst at BEBR for his efforts in gathering the data used in this study.

Each year, new companies were added to the survey list, and existing ones dropped as they either discontinued their R&D efforts, discontinued business activity, or moved out of state. When new companies were added to the list, employment and financial information dating from 1986 was included, when possible, in order to establish trends. By the end of 1989, 359 high technology companies had been contacted and surveyed. Data from previous years have been recalculated.

PROFILE OF UTAH'S HIGH TECHNOLOGY SECTOR

High technology companies have come into their own as important segments of Utah's economy. For purposes of evaluation, high tech companies in the state have been grouped into the following segments:

Aerospace Components and Equipment
Analytical Equipment and Measuring Devices
Biomedical and Medical Products
Chemicals
Communications Equipment
Composite Materials
Computer Equipment
Electronic Components
Lasers/Optics
Pharmaceuticals
Plant Products
Robotics
Software/Systems Developers
"Other" (Not Elsewhere Classified)

The 359 high tech companies surveyed in 1989 employ approximately 37,000 people and reported sales of more than $4.5 billion,(Table 1). Of the total high tech ventures in the study, 218 are manufacturing firms, and include some of the state's largest manufacturing concerns (Table 2). Roughly 30 percent, or one in three individuals working in Utah's manufacturing sector, is employed by a high tech company.

Twenty-nine companies are branch operations of organizations located outside of Utah. Sixteen of the 29 branch operations entered the state through a purchase or buy-out of a "home-grown company"; that is, a company founded by a Utah entrepreneur. In 14 of the 16 buy-outs, the original founders are no longer involved in the organization.

Table 1
Characteristics of Utah's High Technology Companies

	Number of Companies	Total Employment	Technical Employment[a]	Total Sales[b]	R&D Spending[b]	Utah-Based[c]
Aerospace Components	6	11,914	2,337	$1,266,938.0	$320,802.0	4
Analytical/Measuring Devices	13	380	96	28,627.5	3,401.8	13
Biomedical/Medical Products	45	4,557	501	428,966.1	20,695.0	39
Chemicals	9	204	37	15,742.4	1,178.0	7
Communications Equipment	24	963	827	97,908.0	15,389.0	24
Composite Materials	10	372	88	20,940.5	3,731.2	7
Computer Equipment	33	6,016	2,103	758,025.5	118,192.0	31
Electronic Components	33	4,920	706	700,155.2	75,938.8	26
Lasers/Optics	7	298	60	13,987.0	1,805.0	7
Pharmaceuticals	8	90	54	4,838.5	3,928.0	8
Plant Genetics	4	218	107	10,215.0	5,260.0	4
Robotics	4	66	15	750.0	550.0	4
Software/Systems	141	5,791	1,752	1,090,908.6	83,959.8	134
Other	22	1,009	186	82,938.0	11,788.2	21
Total	359	36,798	8,269	$4,520,940.4	666,663.9	329

[a] Scientists, engineers, and computer programmers.
[b] Numbers in thousands of dollars. Numbers may not total due to rounding.
[c] Number of companies which are headquartered in Utah.
Source: Bureau of Economic and Business Research, University of Utah, unpublished data (1990).

Table 2
Major High Technology Companies in Utah

Company	Employment[a]	Sector	Product
Thiokol Corporation	6,700	Aerospace	Solid propulsion systems, ordnance and composite products for space and defense.
Hercules Aerospace Company	4,530	Aerospace	High energy solid propellents and very high performance structures for DOD, NASA, and commercial applications.
Unisys Corporation	3,000	Computers	Engineering functions including systems integration, electronic warfare, and command communication links.
WordPerfect Corporation	1,600	Software	Office automation software including word processing software, database and spreadsheet packages, and a graphics presentation package.
Signetics	1,600	Electronics	Semiconductors, integrated circuits, and wafer fabrication.
Deseret Medical, A Division of Becton Dickinson Corp.	1,560	Medical	Peripheral catheters and other health care products.
National Semiconductor	1,250	Electronics	Semiconductors; analog, microprocessors, telecommunications, memory, gate arrays.
Evans & Sutherland	1,200	Computers	Special purpose digital computers and software, principally used for graphics and flight simulation.
Varian-Eimac	1,000	Electronics	Electronic vacuum tubes.
Novell, Inc.	900	Software	Business-wide networks that integrate minicomputers and mainframes.
Iomega Corporation	920	Computers	High performance, removable mass storage products for desktop computers.
Abbott Critical Care Systems	920	Medical	Disposable medical devices used in a critical care environment.
TOTAL EMPLOYMENT	25,180		

---

[a] Utah employment only.

Source: Bureau of Economic and Business Research, University of Utah, unpublished data (1990).

Branch organizations employed more than 16,000 people in 1989, or about 43 percent of Utah's total high tech employment. In comparison, over 90 percent of the high tech companies doing business in Utah are headquartered here; a large share have been founded by Utah entrepreneurs. Within this group, it is not uncommon to find one of the early founders still at the helm – maintaining an active role in the company's growth and development.

Locational Distribution

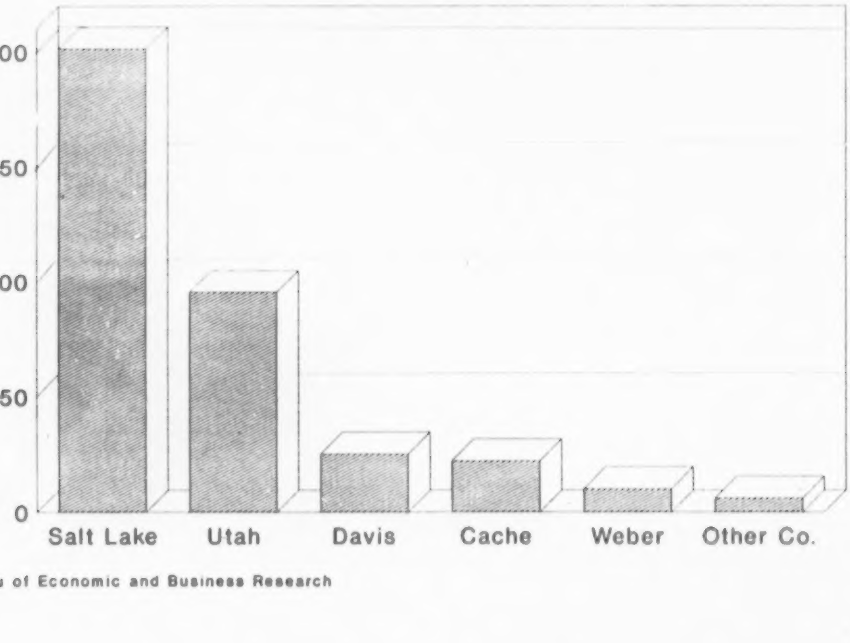
Geographically, Salt Lake and Utah Counties appear to be the location of choice for operating a high tech company in Utah. High tech companies can be found in many counties throughout the state, but Salt Lake and Utah are home to 83 percent. The largest critical mass is in Salt Lake County with 201 high technology companies. Utah County boasts the second largest agglomeration with 95 companies; 85 percent are located in the Provo/Orem area which has a high concentration of software companies (Exhibit 1). In 1989, 50 percent of the high tech companies located in the Provo/Orem area were software developers.

Employment in the High Tech Sector

A size distribution of Utah's high tech sector resembles a pyramid - a large base comprised of many small companies (40 percent of Utah's high tech firms have fewer than 50 employees; these companies account for slightly more than half of total high tech employment), and relatively few large high tech employers (only 12 high tech companies in Utah employ more than 500 people, but this small group accounts for 43 percent of total high tech employment).

Almost 12,000 employees work for aerospace component manufacturers. As a group, aerospace component manufacturers represent less than 2

Exhibit 1
Location of Utah Technology Firms
by County, 1989



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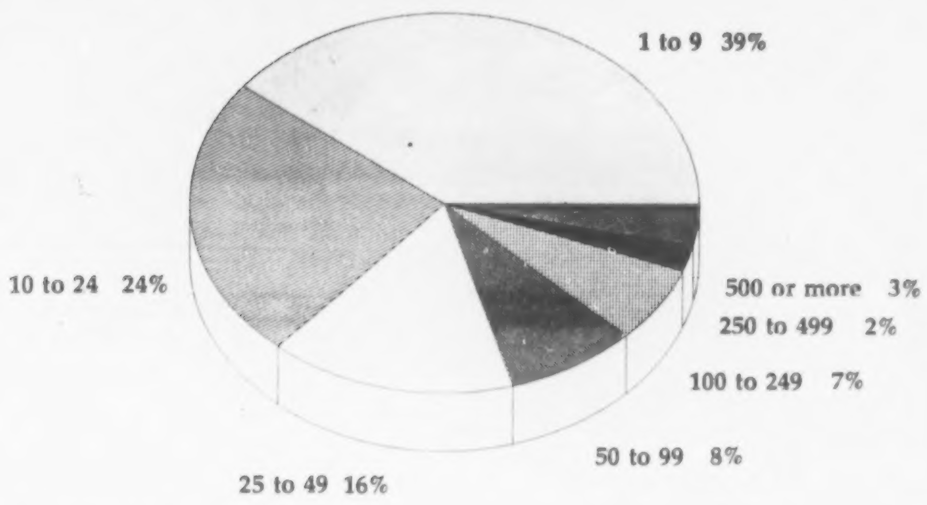
Distribution of High Tech Firms by Number of Employees



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percent of all high tech companies; however, they account for 32 percent of total high tech employment. Most are large, well-established firms primarily involved in research, development, testing and evaluation for the Department of Defense or the National Aeronautics and Space Administration.

Software developers are on the other end of the spectrum. Almost half of the companies in Utah's high technology sector are involved in software development. This group, consisting of 144 companies, employs approximately 5,800 people. With just a handful of exceptions, this segment is characterized by many small companies - most have fewer than 25 employees. Other segments with considerable employment levels include: (1) Computer Equipment (6,016); (2) Electronic Components (4,920); and (3) Biomedical/Medical Products (4,557).

On balance, Utah's high technology sector is characterized by high employment concentrations in a few firms. The importance of this small group is illustrated by the impact they bring to bear on total high tech employment. While over half of the companies surveyed added to their work forces in 1989, employment increases overall were negligible. During 1989, several large high tech companies made significant reductions in their work forces. These reductions more than offset the employment gains reported at smaller organizations.

Product Sales

In 1989, high technology companies in Utah reported sales in excess of $4.5 billion, and R&D expenditures of $666.6 million. Two segments – aerospace and software – each reported combined sales of more than $1.0 billion. Each of these segments have one or two companies which account for a major share of the reported revenues. At approximately 81 percent of sales, pharmaceutical companies reported the highest ratio of R&D spending of any research sector. With few exceptions, these companies are quite young and still in the early product development stage. Some have yet to market a product.

Only a handful of high tech companies sell products exclusively in the regional market (Utah and surrounding states). Typically, those that do are small software companies which have not yet reached a point where market expansion is feasible.

Roughly 25 percent of Utah's high tech companies limit their product sales to the domestic market only. More than one-half of those companies that sell only in the U.S. are software firms. Company size (too small), and product modification difficulties were the reasons most often given for not pursuing a foreign market. In contrast, 67 percent of Utah's high tech firms market products internationally. However, many indicated that foreign sales were limited to just one or two countries.

The Role of the University in Fostering High Tech Development

Universities play a dual role in the creation and sustenance of high technology activities. In nearly every successful high tech region in the U.S. there exists one or more research universities. The ties between entrepreneurs and such universities are well-documented. Utah is no exception. Universities in Utah have played an integral role in the development of the state's high tech base. Of the 413 companies tracked from 1986 through 1989, 54 represented that they were spin-offs from technologies or research conducted at a university; overwhelmingly these came from either the University of Utah, Brigham Young University or Utah State University. Another group consisting of 23 companies indicated that they have licensed technology initially undertaken at one these universities, making further refinements and ultimately integrating it into the company's existing product line. Medical product developers are the most likely candidates to have spun-out of, or licensed technology from, a university.

Utah's universities also play an important role by providing well-educated people for high tech companies. Over half of the high tech companies located in Utah were founded by a graduate of a Utah university. Furthermore, interviews with some of the state's largest high tech companies reveal that a significant portion of these organizations' technical needs are being met with Utah's university graduates. The existence of strong science, engineering, and computer programs at the state's institutions of higher education has been, and should continue to be, a critical factor in high tech development in Utah.

Sources of Funding for High Tech Companies

Financing a high tech venture is a concern of entrepreneurs throughout most of the country. Well over 80 percent of Utah's high tech companies were founded with a combination of owners' resources, and the resources of friends and relatives. Fewer than 3 percent of Utah's high tech firms were initially financed with institutional venture funds, although biomedical companies have been quite successful in securing venture capital at later stages of their development.

High tech companies in Utah have raised over $109 million in institutional venture funds; however, the pool of venture capital in the state is small, and most have had to secure money from outside the state. Furthermore, venture capitalists are very specific about the characteristics they look for when investing their money. Most Utah high tech companies either do not meet these requirements, or the entrepreneurs are unwilling to give up equity and/or control of the company in return for capital. For these reasons, follow-on funding and growth financing for high technology companies in Utah generally comes from working capital generated through company sales.

Educational Characteristics of Utah's High Tech Entrepreneurs

Given the complexities of developing new technologies and products, it is not surprising that more than 50 percent of the high tech company founders have more than 16 years of education. Approximately 35 percent indicated that they had between 12 and 16 years of education. Only 3 percent indicated they had fewer than 12 years of schooling. Of the largest research sectors, founders of biomedical/medical companies tended to have graduate degrees more often than founders of other companies. Founders of software development companies rank second highest, while founders of computer equipment companies have the lowest ratio of graduate degrees (Table 3).

Table 3
Educational Profile of Founders
Selected Research Sectors

Research Sector	Years of Education			No Response[a]
	1 - 12	12 - 16	16+	
Electronic Components	3%	28%	41%	28%
Computer Equipment	7%	46%	28%	18%
Biomedical/Medical Products	2%	20%	66%	12%
Software/Systems	1%	41%	49%	9%
All Companies	3%	34%	52%	12%

[a] Represents percentage of companies not responding to question.
Note: Numbers reflect percentage of founders attaining the specified level of education.
Many companies reported having more than one founder.
Source: Bureau of Economic and Business Research, University of Utah, unpublished data (1990).

Engineering, business, and science appear to be the primary fields of interest for high tech entrepreneurs. Almost half of the founders with graduate degrees are graduated from one of Utah's colleges or universities. Although all institutions in Utah are represented, graduates from the University of Utah and Brigham Young University head the list.

A HISTORIC OVERVIEW OF HIGH TECH DEVELOPMENT IN UTAH

For its size, Utah has been extremely fortunate in the development of home-grown high technology companies. Utah's high technology industry has a long history dating from the early 1900s, specifically in the defense and electronic sectors. Yet, it was not until the mid-1970s that the formation of high tech companies began to hit the double digit mark. Only 70 companies currently in existence were founded prior to 1975. Fully one quarter of these early technology companies were electronics manufacturing concerns who, for the most part, were in Utah as a result of national expansions. A notable exception was Evans & Sutherland, a home-grown computer company.

Evans & Sutherland

Founded in 1968, Evans & Sutherland is one of Utah's oldest, and most successful high technology companies. The founders, David Evans and Ivan Sutherland, were two of the early pioneers in the development of computer graphics technology. The company designs digital computers, software systems, and display devices that are used in applications which require intensive, high-speed computation and which are aided by visual presentation. In 1989, the company reported sales of $136 million and employed approximately 1,200 people in Utah.

By 1979, the state was experiencing a surge in both the creation of high technology companies and the range of technologies under development (Table 4). Two of Utah's most notable successes came from this era - WordPerfect Corporation and Novell, Inc.; both are home-grown, software companies.

Table 4
Creation of High Tech Companies in Utah by Founding Date

Research Sector	Prior to 1970	1970 to 1974	1975 to 1979	1980 to 1984	1985 to 1989
Aerospace Components	5	0	0	3	2
Analytical/Measuring Devices	1	2	4	5	3
Biomedical/Medical Products	6	5	9	23	10
Chemicals	1	1	3	4	1
Communications Equipment	3	4	4	8	5
Composite Materials	2	3	0	2	5
Computer Equipment	4	3	6	19	7
Electronic Components	9	7	9	12	1
Lasers/Optics	0	1	1	2	5
Pharmaceuticals	1	0	1	2	6
Plant Genetics	1	1	2	0	1
Robotics	0	0	1	3	0
Software/Systems	7	4	24	70	60
Other	4	1	5	6	8
Total	38	32	69	159	114

Note: One company was founded in 1990.
Source: Bureau of Economic and Business Research, University of Utah, unpublished data (1990).

WordPerfect Corporation

WordPerfect was formed in 1979 with the express purpose of developing a word processing program that was a significant departure from the Wang standard – the most commonly used word processing system on the market in the late 1970s. When the personal computer was introduced to market in the early 1980s, WordPerfect was one of only a handful of companies with a user friendly word processing program. The ensuing demand for applications software, combined with a series of strategic development and marketing decisions made by WordPerfect's founders, have resulted in a company that is now one of the largest independent personal computer software companies in the world.

Novell, Inc.

Novell's early years were a bit rocky, but this company has become a world-class leader in the development of networking software. Rather than producing for a growing market, Novell has grown its own market; that is, convincing the end user that networking is both a valuable and viable tool. The company's success is impressive. In 1989, Novell employed approximately 900 people in Utah and reported sales in excess of $400 million.

Software Development

The 1979 surge in the creation of technology companies turned into a virtual explosion by the early

1980s as high tech development took center stage throughout Utah and much of the nation. Of particular importance to Utah has been the spectacular growth in the creation of software development companies. Several factors are responsible for this phenomena. First, the barriers of entry into software development are unusually low; specifically, they are not capital-based. Second, Utah has several well-established software development companies to serve as role models for up-and-coming entrepreneurs. Finally, the contribution made by Brigham Young University is impressive. Both the Computer Science Department and the Technology Department at BYU have long emphasized the development of highly sophisticated software programs. From 1980 through 1985, 86 software start-ups were formed in the state; roughly 46 percent of the total high tech start-ups during that period.

Biomedical/Medical and Computer Equipment

The number of biomedical/medical products manufacturers, and computer equipment manufacturers also increased during this period, although at a much slower rate for several reasons. Most importantly, the costs associated with the start-up of a high tech manufacturing facility can be enormous. And, as discussed previously, the amount of venture capital available to Utah start-ups is limited. Furthermore, few if any entrepreneurs have the personal resources needed to fully develop, manufacture and market a new biomedical or computer product. In the case of biomedical companies, product development costs can be particularly high if the product requires FDA approval.

By the end of 1989, 359 high tech companies were doing business in Utah. While this is roughly the same number as in 1986 (361), Utah's high tech sector is far from stagnant.

Of the 361 companies active in 1986, only 316 were still in business by the end of 1989. Another eight companies were still in business, but had either discontinued R&D activities, or transferred development programs to locations outside Utah. Over the course of the past four years, 53 new high technology companies have been formed. Not all have been successful. In fact the software segment has the highest mortality rate of all segments in the high tech industry, followed by the biomedical/ medical and the computer segments.

High Tech Employment Trends

Employment growth in Utah's high tech industry is a reflection of national trends. Essentially, it is slowing down. From 1986 to 1987, employment in Utah's high tech industry increased more than 5 percent, several times that of the state's total non-agricultural employment growth rate for that same year. Due to a series of unfortunate events -- the stock market crash in October of 1987, increased foreign competition, consolidations and mergers, intense price competition and the rising cost of capital -- high tech employment in Utah plunged in 1988 (Table 5).

By the end of 1989, most segments had either stabilized or were expanding, yet high tech employment grew less than 1.0 percent as Aerospace Equipment manufacturers collectively reduced their work forces by 1,100 people in 1989. This dichotomy highlights an important issue in the growth of Utah's high tech industry. As indicated earlier, a sizable number of Utah's high tech companies are relatively young, small, home-grown concerns. From 1986 through 1989, these smaller organizations provided almost all the new jobs created in the high tech sector (Table 6).

As indicated in Table 6, from 1986 through 1989, employment at small companies (500 people or less) increased by 3,800. At the same time, larger companies reduced their collective employment base by more than 2,200 people. Of the 12 companies with 500 employees or more in 1986, seven were branch operations. It would appear that home-grown high tech companies offer the greatest potential for industry-wide expansion.

The changing occupational mix of Utah's high tech industry is another important trend. By their very nature, technology development companies tend to have more employees who fall into the technical disciplines, i.e., scientists, engineers, and computer programmers. These positions typically require

Table 5
Four-Year Employment Trends
1986 - 1989

Sector	1986	1987	1988	1989
Aerospace Components	13,781	13,104	13,142	11,918
Analytical/Measuring Devices	314	355	349	380
Biomedical/Medical Products	4,117	4,434	4,580	4,557
Chemicals	207	208	206	204
Communications Equipment	932	885	850	963
Composite Materials	342	318	320	372
Computer Equipment	6,032	6,721	6,107	6,016
Electronic Components	4,499	4,733	4,822	4,920
Lasers/Optics	266	266	259	298
Pharmaceuticals	49	78	74	90
Plant Products	228	316	200	218
Robotics	42	47	60	66
Software/Systems	3,850	4,948	4,907	5,791
Other (NEC)	594	733	764	1,009
Total	35,253	37,146	36,640	36,802

Note: Employment levels are for high tech companies only.
Source: Bureau of Economic and Business Research, University of Utah, unpublished data (1990).

advanced degrees, and are generally higher paying than those at the production level. After remaining at 24 percent of total high tech employment for three years, technical employment dropped to 22 percent of total employment in 1989; again, the largest loss was in the aerospace group. At the same time, production level employment gained a slightly larger share of the total in 1989 (42.6% in 1988 and 43.4% in 1989).

Taken as a whole, a casual assessment of the current trends in Utah's high technology sector would suggest that the industry is in a downturn. However, a more detailed approach suggests that only certain segments are in decline, some are neither increasing nor decreasing in any meaningful measure, while others are increasing at a rapid pace.

Segment Trends

Aerospace

Aerospace companies have traditionally held an important place in Utah's high technology sector. Since 1986, aerospace manufacturers have accounted for at least 30 percent of total high tech employment. Furthermore, this segment is dominated by the activities of a handful of very sizable companies. Therefore, it follows that employment fluctuations at these companies could have a significant impact on the sector as a whole, and indeed this has been the case.

For each of the past four years, employment in Utah aerospace companies has been declining as a relative percent of total employment. In 1986, aerospace accounted for 39 percent of the state's total high tech employment. By the end of 1989, aerospace accounted for only 32 percent of total employment due to a loss of over 1,800 people. Aerospace companies nationally are struggling to remain profitable in the face of declining business opportunities and reductions in the federal defense budget. Even the commerical aerospace manufacturers are grappling with cost and productivity issues. Some of this downturn may be ameliorated by recent events in

Table 6
Employment Trends by Company Size
1986 Base Year

	1986 Employment Levels:			
	0	1 - 99	100 - 500	500+
Number of Companies	55	324	22	12
Number Headquartered in Utah	53	268	16	5
Number No Longer in Business[a]	4	41	1	0
1986 Employment Total	0	5,285	3,929	26,039
1989 Employment Total	438	7,015	5,565	23,784
Average Annual Growth Rate	-	9.9%	12.3%	-2.9%
Number of Jobs Created (Lost)	438[b]	1,730	1,636	-2,255
Relative Share of 1986 Total High Tech Employment	0.0%	14.9%	11.1%	73.8%
Relative Share of 1989 Total High Tech Employment	1.2%	19.1%	15.1%	64.6%

[a] Includes companies that have moved from Utah.

[b] By the end of 1989, these 55 companies employed a total of 438 people.

Source: Bureau of Economic and Business Research, University of Utah, unpublished data (1990).

the Middle East, but many aerospace firms are looking for ways to reduce their dependence upon military contracting. Over the long term, this particular segment will see a continued shakeout of weak and marginally productive companies.

Computer Equipment

Computer equipment has been another volatile segment. After a considerable employment jump in 1987, this segment has been slowly declining over the past two years, both in real terms and as a percentage of total high tech employment. A steady weakening in domestic demand for personal computers, strong foreign competition, and constant pressure to reduce prices will combine to keep this segment of the high tech sector in a flat or declining growth pattern. Furthermore, as the construction of computer manufacturing facilities requires large amounts of capital, it is unlikely that Utah will see an acceleration in the number of computer equipment start-ups. Rather, growth will have to come from expansion of existing facilities. The two most likely candidates for considerable growth in this segment are Evans & Sutherland Computer Company and Iomega Corporation.

Chemicals/Plant Genetics

The "neutral" segments of Utah's high tech sector include chemicals and plant genetics. These two segments were at essentially the same employment levels in 1989 as in 1986, although plant genetics experienced a large increase from 1986 to 1987 but dropped below the 1986 figure in 1988. Analytical/measuring devices is another segment that will likely remain flat.

Software/Electronic Components

The high tech success stories include software developers and electronic component manufacturers. Together, these two segments have increased the high tech employment base by 2,362 people since 1986. Nationally, the software market is continuing a trend of strong, steady growth. Utah's software segment is a reflection of this vitality, and continues to be the fastest growing segment of Utah's high technology sector. The worldwide outlook is bright as the software market is expected to continue its explosive growth. Industry analysts are projecting that this market could hit $1 trillion by the year 2000. Utah's software development companies will continue to take advantage of the rapidly growing demand for software products both domestically and abroad.

Utah's high tech electronic components segment is a highly fragmented cross-section of companies manufacturing a wide range of products. Nonetheless, there is a relatively high employment concentration in the semiconductor group of this segment. Primarily due to increased foreign competition, a downturn is expected in the manufacture of semiconductors which could result in employment declines at Utah-based semiconductor facilities. Demand for other electronic components such as printed circuit boards, electronic coils and transformers, is tied to key end-user markets (automobiles, telecommunications, and computers). In light of this, it may be difficult for Utah's electronic component manufacturers to maintain their present level of growth.

Health Care Products

The "Health Care" group (biomedical/medical products, pharmaceuticals) also shows future potential. Most industry analysts agree that the shake outs which occurred in the mid-1980s resulting from government-introduced cost containment measures are over. Growth will be fueled by demographics and prevalent disease conditions. Specifically, the aging populations in the United States and its major trading partners, will continue to spur demand as the elderly require increased medical attention. The market for disposables, surgical appliances, supplies, and electromedical equipment hold the most promise for continued growth whereas the demand for X-ray and related products will remain stagnant.

Communications/Composite Materials

Other segments which appear to have stabilized and may see future expansion include communications equipment and composite materials. The communications segment is comprised of a complex group of technologies which include radio communication and detection equipment (RCDE), satellite systems, microwave systems, and fiber optics. Utah's communications segment is concentrated in two of these areas - RCDE (58%) and satellite systems (16%). Much of the demand for products in these two groups is driven by military contracting, although an increasing number of products in RCDE that were initially designed for military use are now established in the civilian market. Over the long term, steady growth is expected for RCDE as the result of increased industrial and commercial demand, especially for mobile and fixed radio equipment and television broadcasting equipment. Slow growth is projected for the satellite sector primarily for those companies who are able to reduce their reliance on military contracts and develop commercial applications instead.

Composite materials have been used primarily in the aerospace industry, although other promising uses include the construction of sports equipment, automotive, and industrial products. However, due to the expense of composite fibers, the greatest demand in the foreseeable future will continue to come from aerospace. Healthy growth in this segment will be dependent upon material unit cost reductions, and further expansion into non-military markets such as medical implants, industrial machinery, and storage of corrosive chemicals.

Other Segments

There are several small, but rapidly growing segments in Utah's high tech sector. Included are pharmaceuticals (part of the health care group), robotics, and laser/optics manufacturers, many of which are still in the early R&D stages. These segments, representing a very modest portion of high tech activity, should continue to increase as companies in each group move from the R&D phase and begin production and manufacturing activities over the next few years.

CONCLUSION

Is the bloom off Utah's high tech rose? Certainly, there are segments presently in a period of retrenchment, namely aerospace and computers. And, there is no question but that these two segments have held important places in Utah's high tech sector and further reductions in either will continue to negatively impact the sector as a whole. On the other hand, it is possible that the composition of Utah's high tech sector will change as the software, electronic components, and health care group segments continue to expand.

For its size, Utah has been tremendously successful in the high tech arena. There are at least a dozen companies in the state which are widely recognized as leaders in their respective fields.

Given the current successes, there is a proclivity to believe that with the right ingredients, these "home runs" could be common occurrences. Indeed, there are small companies in Utah which do have the potential to become major players in the technology field. But there are many more that are "me-too" companies. These cater to a very narrow niche in an existing, established market that simply does not have growth potential. The most successful high tech companies in Utah are those that either created the market for their products, or were early entrants in a fledgling market.

The high tech playing field is changing. Venture funds are harder to acquire, global competition is increasing, foreign governments are putting greater amounts of capital into developing new technologies. All of this spells difficult times ahead for U.S. companies.

However, in retrospect, small, home-grown technology companies will also help augment the high tech sector in Utah. These are companies that are "invested" in the state; they have individuals at the helm who want to live and work in the state. Over the course of the past four years, employment growth at these smaller technology companies has been impressive. Indications are that these companies may provide the impetus behind future growth in the high tech sector.

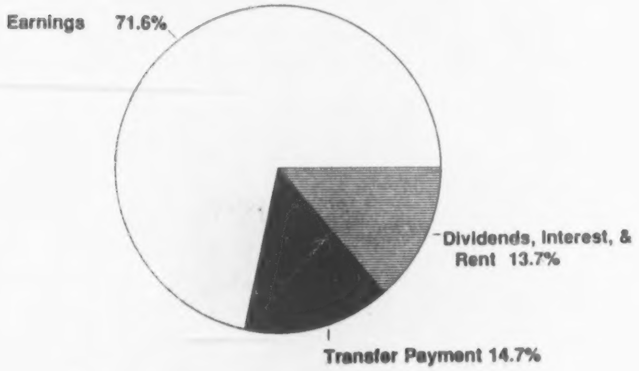
There is also a plethora of high tech companies in Utah which are still in the early development stages. It is simply a matter of time before these companies will move into the manufacturing and production phase. At that point, their contribution may become invaluable to both Utah's economic growth and the expansion of the state's high tech sector.

In any case, with the advent of the European Community picture in 1992 and the present changing situation in the Middle East, it is difficult to predict Utah's future in the high tech arena.

ERRATA

The following chart is reprinted with a correction on the identification of pie chart segments. Transfer Payments was identified incorrectly in the May/June 1990 issue, Figure 4, page 5.

Figure 4
Percent Distribution of Personal Income by Type — State of Utah, 1988



Data Source: U.S. Department of Commerce

Utah Business Statistics

UTAH DATA	May 1989	May 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Total Personal Income (seasonally adjusted) (mil. of dol.) (qtly.)	22,061	NA	NA	NA	21,247	NA
New Corporations (no.)	525	645	22.9%	493	451	9.3%
New Car, Truck, and Motor Home Sales (no.)	5,762	NA	NA	NA	5,107	NA
Agriculture						
Average Prices Recorded by Farmers (dol.)						
Beef Steers and Heifers (cwt) (thous.)	71.50	77.20	8.0%	74.03	70.14	5.5%
Lambs (cwt)	64.30	46.60	-27.5%	56.60	60.38	-6.3%
Milk Wholesale (cwt)	11.30	12.70	12.4%	13.23	11.83	11.8%
Alfalfa Hay, Baled (per ton)	83.00	85.00	2.4%	84.92	80.08	6.0%
Cattle Slaughtered (live weight) (thous. of lbs.)	48,283	46,707	-3.3%	47,835	47,021	1.7%
Construction						
Total Construction (thous. of dol.) 1	75,716.6	113,630.4	50.1%	81,489.4	68,623.7	18.7%
Residential	44,049.4	60,154.2	36.6%	40,439.2	33,729.0	19.9%
Nonresidential	18,786.7	31,041.4	65.2%	24,502.2	21,979.4	11.5%
Additions, Alterations, and Conversions	12,880.4	22,434.8	74.2%	16,548.1	12,915.2	28.1%
Total Permit Construction (thous. of dol.) 2	78,937.7	131,887.0	67.1%	89,110.4	73,813.7	20.7%
Residential	45,873.4	65,019.7	41.7%	42,030.1	35,186.1	19.5%
Nonresidential	19,975.7	41,743.7	109.0%	31,766.9	24,794.5	28.1%
Additions, Alterations, and Repairs	13,088.6	25,123.6	92.0%	15,313.4	13,833.1	10.7%
New Dwelling Units (no.)	563	768	36.4%	522	470	11.1%
Employment						
Civilian Labor Force (thous.)	781.7	788.6	0.9%	794.4	770.2	3.1%
Total Employed Persons	738.1	750.5	1.7%	760.6	733.3	3.7%
Unemployed Persons	43.6	38.1	-12.6%	33.9	36.5	-7.3%
Percent Total Labor Force	5.6	4.8	-14.3%	4.3	4.8	-11.0%
Employees on Nonagricultural Payrolls (thous. of jobs)	690.0	723.4	4.8%	703.3	672.5	4.6%
Manufacturing	102.4	105.3	2.8%	103.9	101.1	2.8%
Mining	7.9	8.7	10.1%	8.4	7.9	5.7%
Contract Construction	26.7	27.3	2.2%	26.5	25.4	4.3%
Transportation, Communication, and Utilities	40.4	42.6	5.4%	41.8	40.2	3.9%
Wholesale Trade	38.5	40.5	5.2%	39.1	36.8	6.2%
Retail Trade	126.3	135.1	7.0%	131.1	123.4	6.2%
Finance, Insurance, and Real Estate	33.0	34.1	3.3%	33.5	33.2	0.8%
Services 3	164.2	176.0	7.2%	171.6	160.4	7.0%
Federal Government	40.6	41.4	2.0%	40.3	39.6	1.7%
State Government 4	41.0	42.9	4.6%	40.9	39.1	4.8%
Local Government 4	69.0	69.5	0.7%	66.2	65.3	1.4%
Average Weekly Hours						
Manufacturing	39.3	39.8	1.3%	40.0	40.3	-0.8%
Mining	40.5	42.8	5.7%	41.7	40.6	2.9%
Wholesale Trade	37.2	36.9	-0.8%	36.2	37.6	-3.7%
Retail Trade	27.4	26.4	-3.6%	27.0	27.5	-2.0%
Amount of Unemployment Compensation (thous. of dol.)	5,134.3	5,256.6	2.4%	4,929.2	5,386.6	-8.5%
Finance						
Savings, Savings and Loan Association (mil. of dol.)	2,195.5	1,860.7	-15.2%	2,048.6	2,329.3	-12.0%
Tax Collections by the State of Utah (thous. of dol.)						
Total Tax Collections	247,349.8	62,185.2	-74.9%	163,127.9	149,054.1	9.4%
Sales and Use Tax	136,088.8	6,572.2	-95.2%	58,408.7	55,303.3	5.6%
Motor Fuel Tax	10,603.5	10,583.9	-0.2%	11,718.8	10,988.3	6.6%
Individual Income Tax	45,765.0	21,371.6	-53.3%	54,018.4	52,320.2	3.2%
Corporation Franchise Tax	2,913.8	-897.4	-130.8%n	4,305.8	7,138.9	-39.7%
Production						
Crude Oil to Refineries (thous. of bbls.)	5,057.5	3,728.2	-26.3%	3,532.6	4,450.6	-20.6%
Crude Oil (thous. of bbls.)	2,478.3	2,379.6	-4.0%	2,327.2	2,562.5	-9.2%
Natural Gas (mil. of cu. ft.)	24,104.0	26,925.1	11.7%	23,936.8	23,013.1	4.0%
Coal (thous. short tons)	1,703.0	2,013.0	18.2%	1,847.3	1,559.6	18.5%
Tourism/Travel						
Air Passengers (total no. on and off)(S.L. Int'l Airport)	871,611	892,313	2.4%	1,006,148	905,088	11.2%
Highway Traffic Count Across State Lines	43,017	43,866	2.0%	42,184	NA	NA
Transient Room Taxes (thous. of dol.)	1,336.8	166.6	-87.5%	537.4	546.5	-1.7%
Visits, State, Nat'l. Parks, Monuments (thous.)	1,513.7	1,489.2	-1.6%	1,123.9	1,111.2	1.1%
Utilities						
Telephone Lines in Service (Mt. Bell)(Residential)	497,893	513,236	3.1%	506,522	492,998	2.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	185,601	193,377	4.2%	188,869	183,315	3.0%
Electric Customers (Residential)	483,723	489,106	1.1%	486,480	479,569	1.4%
Electric Customers (Commercial)	47,754	50,131	5.0%	49,013	47,379	3.4%
Natural Gas Customers (Residential & Commercial)	471,888	485,288	2.8%	478,921	464,229	3.2%
Natural Gas Customers (Industrial)	569	573	0.7%	568	556	2.1%

Utah Business Statistics

UTAH DATA	May 1989	May 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
Davis County						
Non-Ag. Employment (thous.)	57.3r	59.9f	4.5%	56.8	54.6	4.0%
Unemployment Rate	4.7r	4.2	-10.6%	4.0	4.3	-8.3%
Auth. Permit Construction (thous. of dol.)	9,825.5	13,224.5	34.6%	10,858.8	8,294.2	30.9%
New Dwelling Units (no.)	90	86	-4.4%	74	65	14.9%
Postal Receipts (thous. of dol.)	687.4	651.6	-5.2%	640.0	498.4	28.4%
Electric Customers (Residential)	49,097	49,610	1.0%	49,457	48,453	2.1%
Electric Customers (Commercial)	3,602	3,628	0.7%	3,652	3,565	2.4%
Natural Gas Customers (Residential)	51,719	52,803	2.1%	52,287	51,036	2.5%
Natural Gas Customers (Industrial)	57	56	-1.8%	56	54	3.4%
Telephone Lines in Service (Mt. Bell)(Residential)	56,802	60,144	5.9%	58,337	55,958	4.3%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	11,881	12,812	7.8%	12,342	11,613	6.3%
Salt Lake County						
Non-Ag. Employment (thous.)	352.1r	367.2f	4.3%	360.4	344.9	4.5%
Unemployment Rate	5.1r	4.3	-15.7%	3.9	4.4	-12.2%
Auth. Permit Construction (thous. of dol.)	33,100.5	54,346.9	64.2%	37,448.3	31,842.3	17.6%
New Dwelling Units (no.)	186	241	29.6%	185	178	3.9%
Postal Receipts (thous. of dol.)	8,457.7	8,008.3	-5.3%	8,086.8	8,301.4	-2.6%
Electric Customers (Residential)	242,876	245,914	1.3%	244,487	241,248	1.3%
Electric Customers (Commercial)	20,858	21,193	1.6%	21,036	20,641	1.9%
Natural Gas Customers (Residential)	224,667	228,376	1.7%	226,215	222,226	1.8%
Natural Gas Customers (Industrial)	243	244	0.4%	245	239	2.7%
Telephone Lines in Service (Mt. Bell)(Residential)	234,257	242,074	3.3%	238,363	232,051	2.7%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	112,343	117,237	4.4%	114,779	111,751	2.7%
Utah County						
Non-Ag. Employment (thous.)	84.7r	91.2f	7.7%	88.5	83.9	5.5%
Unemployment Rate	4.5r	4.0	-11.1%	3.9	4.1	-6.3%
Auth. Permit Construction (thous. of dol.)	10,406.3	21,714.8	108.7%	13,415.8	11,871.3	13.0%
New Dwelling Units (no.)	79	150	89.9%	85	70	21.7%
Postal Receipts (thous. of dol.)	1,368.2	1,657.9	21.2%	1,590.0	1,312.8	21.1%
Electric Customers (Residential)	53,843	53,244	-1.1%	53,251	52,716	1.0%
Electric Customers (Commercial)	5,958	7,563	26.9%	6,725	5,995	12.2%
Natural Gas Customers (Residential)	62,964	64,322	2.2%	63,642	62,281	2.2%
Natural Gas Customers (Industrial)	75	74	-1.3%	73	71	3.7%
Telephone Lines in Service (Mt. Bell)(Residential)	65,418	66,107	1.1%	66,384	65,420	1.5%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	21,428	20,628	-3.7%	20,433	20,770	-1.6%
Weber County						
Non-Ag. Employment (thous.)	65.0r	67.3f	3.5%	65.7	63.2	3.9%
Unemployment Rate	6.0r	5.6	-6.7%	5.1	5.7	-10.8%
Auth. Permit Construction (thous. of dol.)	6,096.2	9,397.2	54.1%	6,728.9	5,340.0	26.0%
New Dwelling Units (no.)	62	57	-8.1%	44	46	-3.8%
Postal Receipts (thous. of dol.)	659.5	688.7	4.4%	704.3	684.4	2.9%
Electric Customers (Residential)	54,228	54,800	1.1%	54,449	53,846	1.1%
Electric Customers (Commercial)	5,051	5,095	0.9%	5,052	4,975	1.5%
Natural Gas Customers (Residential)	50,611	51,242	1.2%	50,866	50,156	1.4%
Natural Gas Customers (Industrial)	85	83	-2.4%	84	84	0.5%
Telephone Lines in Service (Mt. Bell)(Residential)	47,345	46,947	-0.8%	47,221	46,868	0.8%
Telephone Lines in Service (Mt. Bell)(Nonresidential)	12,246	13,203	7.8%	12,653	12,105	4.5%

1 Obtained from U.S. Bureau of the Census Construction Statistics Division.
2 Obtained from *Utah Construction Report*.
3 Includes services by nonprofit and religious organizations.
4 Includes public schools and college institutions.

NA	Not Available
n	Not meaningful due to negative data.
r	Revised
f	Forecast

Sources:

Personal Income	U.S. Department of Commerce, Bureau of Economic Analysis.
New Corporations	Utah Secretary of State.
New Car and Truck Sales	Utah State Tax Commission, Economic and Statistical Unit.
Agriculture	U.S. Department of Agriculture, Utah Agricultural Statistics Service, *Utah Agriculture*.
Construction Data	U.S. Bureau of the Census and Bureau of Economic and Business Research, *Utah Construction Report*.
Employment Data	Utah Department of Employment Security.
Savings Information	Utah Savings and Loan Institutions.
Tax Collections	Utah State Tax Commission.
Crude Oil Production	Utah Department of Oil, Gas, and Mining and Area Oil Refineries.
Natural Gas Production	Utah Department of Oil, Gas, and Mining.
Coal Production	U.S. Department of Energy.
Air Passengers	Salt Lake City International Airport, Statistics Division.
Highway Traffic Count	Utah Department of Transportation.
Visits to State and National Parks and Monuments	U.S. Forest Service, Utah State Parks and Recreation Department.
Utilities Data	Cooperating Utah Utility Companies.
Postal Receipts	Postmasters in Davis, Salt Lake, Utah, and Weber Counties.

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NATIONAL DATA	May 1989	May 1990	% Change from Year Ago	12-Month Average This Year	12-Month Average Last Year	12-Month Average % Change
U.S. Gross National Product (seasonally adjusted) (bil.) (qtly.)	5,174.0	5,451.6	5.4%	5,315.6	5,022.2	5.8%
Total Personal Income (seasonally adjusted) (bil. of dol.)	4,356.8	4,622.9	6.1%	4,492.3	4,214.9	6.6%
Industrial Production Indexes (seasonally adjusted) (1987=100)	108.3	109.7	1.3%	108.4	107.0	1.3%
New Plant and Equipment Expenditures by Business (bil.) (qtly.)	470.9	506.8	7.6%	491.7	448.4	9.7%
Net Exports of Goods and Services (bil.) (qtly.)	−51.3	−27.0	−47.4%	−37.4	−61.8	−39.5%
Exports of Goods and Services (bil.) (qtly.)	628.8	661.7	5.2%	644.6	587.7	9.7%
Imports of Goods and Services (bil.) (qtly.)	680.0	688.7	1.3%	682.1	649.6	5.0%
Index of Leading Indicators (1982=100)	144.2	146.0	1.2%	144.8	144.5	0.2%
Price Indexes						
Consumer Price Indexes (not seasonally adjusted) (1982-84=100)						
CPI-U (All Urban Consumers) All Items	123.8	129.2	4.4%	126.5	120.7	4.8%
CPI-U (All Urban Consumers) Food & Beverages	124.7	131.1	5.1%	128.0	121.1	5.7%
CPI-U (All Urban Consumers) Housing	122.1	127.1	4.1%	125.2	120.3	4.1%
CPI-U (All Urban Consumers) Transportation	116.0	117.7	1.5%	115.8	111.2	4.2%
CPI-U (All Urban Consumers) Medical Care	147.5	160.8	9.0%	154.5	142.7	8.3%
CPI-U (All Urban Consumers) Energy	97.4	96.7	−0.7%	96.1	91.2	5.3%
Producer Price Index (not seasonally adjusted) (1982=100)						
Producer Price Index, All Finished Goods	114.2	117.7	3.1%	115.5	110.4	4.6%
GNP Price Deflator (1982=100) (qtly.)	125.8	130.9	4.1%	128.4	123.5	3.9%
Civilian Employment (seasonally adjusted)						
Total Civilian Labor Force (mil.)	123.6	125.0	1.1%	124.4	122.6	1.5%
Total Civilian Employment (mil.)	117.1	118.4	1.1%	117.8	116.1	1.5%
Unemployment Rate	5.2	5.3	1.9%	5.3	5.3	−0.5%
Construction						
Total Construction (mil. of dol.)	24,738.2	23,576.5	−4.7%	20,742.0	21,894.3	−5.3%
Residential	11,850.9	10,946.1	−7.6%	9,646.3	10,270.6	−6.1%
Nonresidential	8,269.4	7,502.4	−9.3%	7,282.4	7,674.7	−5.1%
Non-Building	4,617.9	5,128.0	11.0%	3,813.3	3,948.9	−3.4%
New Dwelling Units (no.)	132,959	118,847	−10.6%	106,743	120,489	−11.4%
Interest Rates						
Federal Funds Rate	9.81	8.18	−16.6%	8.65	8.74	−1.0%
Short Term (3-month Treasury bill rate)	8.40	7.78	−7.4%	7.79	7.77	0.2%
Long Term (30-year Treasury bond yields)	8.95	8.90	−0.6%	8.41	9.12	−7.7%
Prime Rates Charged by Banks on Short-term Business Loans (avg.)	11.50	10.00	−13.0%	10.39	10.38	0.0%
Mortgage Rates (new homes)	9.82	9.87	0.5%	9.80	9.18	6.8%

Sources: *Survey of Current Business*, U.S. Department of Commerce: U.S. Gross National Product, Total Personal Income, Industrial Production Indexes, New Plant and Equipment Expenditures by Business, Export/Import Data, Index of Leading Indicators, GNP Price Deflator, National Employment Data, Interest Rates.

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Chase N. Peterson, *President, University of Utah*
John Seybolt, *Dean, Graduate School of Business*

BUREAU OF ECONOMIC AND BUSINESS RESEARCH

R. Thayne Robson, Director
Frank C. Hachman, Associate Director

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